ELEMENTARY MUSIC THEORY

RALPH FISHER SMITH

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BY

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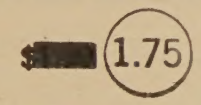

A STUDENT'S WORKBOOK

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To My Friend and Teacher

ARTHUR FOOTE

FOREWORD

The following course in the theory and practice of the fundamentals of music is designed to cover a year's work of three forty or fifty minute periods per week.

The material is not to be given abstractly, but should be coordinated with the performance of music by members of the class.

In so far as is practicable, all examples in the book, as well as the written exercises, should be sung by the class.

A part of each lesson should be devoted to the *hearing* of the best classical and modern music, both vocal and instrumental, as well as to the singing of worth-while songs, attention being directed to the artistic use which the composer has made of the material.

The student who has mastered the contents of this book is equipped with the necessary knowledge and mental technique for the study of advanced ear-training, melody writing, and harmony.

Additioned work based on several of the chapters may be assigned by the instructor,—also, the order of presentation may be altered if deemed wise.

All written work should first be done on practice paper. After the work has been corrected, it should be copied neatly in ink in a blank book provided for the purpose.

Ralph Fisher Smith.

Reading, Pennsylvania, 1930.

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CHAPTER I

The Material of Music

The word *Music* comes from the Latin *musica*, and originally meant any art over which the Muses presided, especially music, and lyric poetry set and sung to music.

Every art requires some kind of Material with which the builder builds or creates. The artist must have canvas and paint; the sculptor, marble, clay or granite; the poet and novelist, words. The raw material of music is **Sound,** the refined material is **Tone.** Everything we hear is sound, but not everything heard is tone. Sound may be divided into (1) Noise and (2) Tone. Noise and Tone are both caused by **vibrations of air** set in motion by some agent, and registering in the brain through the ear. The difference between tone and noise is that noise is caused by Irregular Vibrations such as would be produced by striking the desk with a pencil or dropping a stone on the floor, while tone is produced by Regular Vibrations such as would be caused by drawing a rosined bow over the strings of a violin. Take the piano for example, since it is familiar to all. Tone is produced in this instrument by felt-covered hammers striking stretched wire strings and causing them to vibrate.

One of the characteristics of a tone is **pitch,** i. e., the highness or lowness of the tone. A long, thick, heavy string vibrates slowly and thus gives out a low tone. A short, thin, light string vibrates quickly and thus gives out a high tone. As tension relaxes, the vibrations lessen in number, and the

tone becomes lower or deeper in pitch. (Illustrate with piano or violin, or simply use a piece of string, or rubber bands of different sizes.) Pupils make a list of various sounds with which they are familiar, classifying them as noise or as tone. (Suggested sounds: bells, automobile horns, sound of running motor, bird calls, factory whistles, typewriter in operation, barking of a dog, footsteps of one walking across floor.)

Questions on Chapter One

1. From what does the word *music* come?
2. What is the raw material of music?
3. What is the refined material of music?
4. How may sound be divided?
5. What causes noise?
6. What causes tone?
7. How do tone and noise differ?
8. How are tones produced in the piano?
9. What is one of the characteristics of a tone?
10. Which vibrate faster—long strings or short strings?
11. What causes a low tone?
12. What causes a high tone?

Ear-training for Chapter One

Teacher plays various tones on the piano. Students respond with "higher," "lower," "same," etc.

CHAPTER II

TONE

A **Tone** has **four** characteristics:

1. A tone is High or Low. The highness or lowness of a tone is called **Pitch.**
2. A tone is Long or Short. The length of a tone is called **Duration.**
3. A tone has a certain Force or Power—loud or soft, very loud or very soft, medium loud or medium soft, etc. The various gradations of this force or power of a tone (loudness or softness) are called **Dynamics.**
4. A tone has a certain Quality, determined by the agent producing it. A tone on a violin sounds very different from the same tone on a cornet. The quality of a tone is called **Timbre.**

Tone, then, is the material out of which the composers have made all music, good and bad, just as the twenty-six letters of the alphabet are the material out of which the poets and novelists have made their share of the world's literature. What makes a beautiful poem is the manner in which the poet arranges his words. Likewise, a beautiful song or instrumental piece of music is determined by the manner in which the composer arranges his tones.

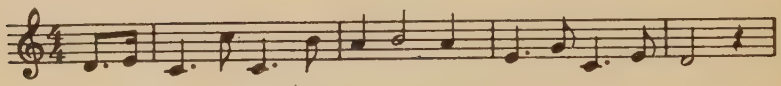
Would the following jumble of words make sense?

Be us up let doing then and
Fate a heart for any with
Achieving still pursuing still
To and learn to wait labour.

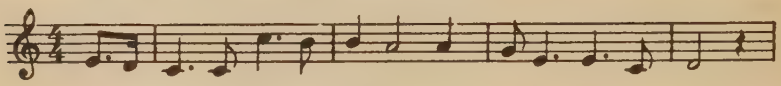
Yet these same words, arranged in proper sequence, become a verse of Longfellow's lovely poem, *A Psalm of Life.*

Let us, then, be up and doing,
With a heart for any fate;
Still achieving, still pursuing,
Learn to labour and to wait.

And this:



becomes the first phrase of *Annie Laurie.*



The teacher should take parts of familiar melodies, playing the tones first in a jumbled manner, then as the composer wrote them, stressing the fact that exactly the same tones are used both times, but the second time in an order that we feel has meaning.

Questions on Chapter Two

1. What distinguishes a good melody from a poor one?
2. What are the four characteristics of a tone?
3. Define **Pitch.**
4. Define **Duration.**
5. Define **Dynamics.**
6. Define **Timbre.**

Ear-training for Chapter Two

Teacher plays high and low tones; students answer as in Chapter One. The tone is long or short, or loud or soft. The teacher or members of the class play on different instruments to bring out the timbre or quality of each.

CHAPTER III

The Staff

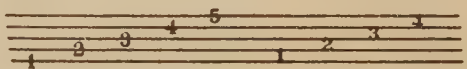
The history of the **Staff** (or Stave) is very interesting. Beginning about the year 900 with a single red line, a yellow line was soon afterward added at a little distance above the red one. Later, these colored lines were replaced by black lines and two more black lines added, making a four line staff. This staff was in general use for several centuries, and is still used in the music of the Roman Catholic and Anglican Churches.

Staves of a varying number of lines have been in use at different times, including those with six, eight, eleven (called the Great Staff), twelve, fifteen, and even more. After a time, however, it was found confusing to read from a staff with so many lines, and by the fifteenth century the five-line staff was well established and universally adopted except for the above-mentioned church music.

Thus the Staff as we use it today consists of five horizontal parallel lines and the four spaces between.

The lines and spaces are numbered upward.

Ex. 1



The staff is used for placing notes, and indicates (together with the clefs) the pitch of the tones to be played or sung.

Signs called Rests are also placed on the staff to indicate silence. As we hear music, we realize that some of the tones are higher and some lower than others. To indicate these differences in pitch, the composer uses the staff and the different clef signs.

Questions on Chapter Three

1. Give a brief history of the staff.
2. Of what does our present staff consist?
3. Draw the staff.
4. How are the lines and spaces numbered?
5. Number the lines and spaces.
6. Are other staves in use today? Where?

Ear-training for Chapter Three

Continue as in Chapter Two, gradually increasing the difficulty of the exercises.

CHAPTER IV

CLEFS.

The word **Clef** comes from the Latin *clavis*, and means **Key.** It is the only musical character by which the pitch of a sound can be absolutely represented.

The **Staff** is simply a series of parallel lines, and, while the second note in the following example represents a tone higher than the first, the **exact** pitch cannot be indicated without a clef sign of some kind.

Ex. 2

Therefore we may say that it is the **Clef** which positively determines the pitch of a tone represented by a given note.

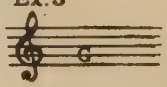
There are three clefs in common use at the present time:

1. The G Clef, or Treble Clef (sometimes called the violin clef).
2. The F Clef, or Bass Clef.
3. The C Clef, or Movable Clef (sometimes called the transposition clef).

These clefs are simply adaptations of old Latin letters.

The G Clef, or Treble Clef is made around the **second** line of the staff, and fixes the pitch G on that line.

Ex. 3

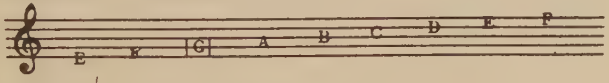


This is the G above middle C on the piano.

The first seven letters of the alphabet (A-B-C-D-E-F-G) are used in music for naming the lines and spaces. After G, we begin again with A.

The lines and spaces are named in alphabetical order.

Ex. 4

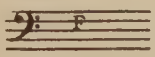


Thus with the G clef, the letter names of the lines are E-G-B-D-F, and the spaces are F-A-C-E.

The G clef is used for music written for women's (or boys' unchanged) voices, soprano and alto, and for the higher instruments, such as the flute, trumpet, violin, etc.

The F Clef, or Bass Clef is made around the **fourth** line of the staff, and fixes the pitch F on that line.

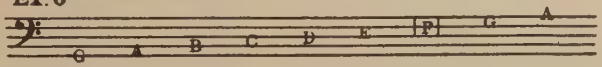
Ex. 5



This is the F **below** Middle C on the piano.

As with the G clef, so with the F clef: if we know the letter name of one line, we can easily name the remaining lines and spaces.

Ex. 6

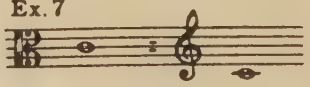


The F clef is used for music written for men's (changed)

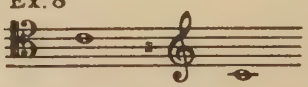
voices, tenor and bass, and for the lower instruments, suc as the trombone, violoncello (usually), baritone horn, strin bass, etc.

The C Clef, or Movable Clef, may be placed on any of the fiv lines, fixing the pitch Middle C on whichever line chose To-day, however, only two of the lines are thus used to any ex tent: the Third and Fourth. When placed upon the thir line, the C Clef is called the Alto Clef, and fixes the pitch Middl C on that line.

Ex. 7



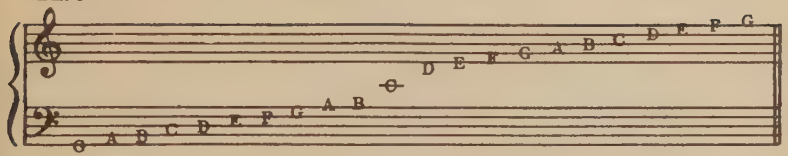
When placed upon the fourth line it is called the Tenor Cle and fixes the pitch Middle C on that line.

Ex. 8

These clefs are rarely encountered in modern vocal musi but are used for some instruments, such as the viola an bassoon.

To avoid the break between the G and F staves, and to mak the lines and spaces continuous and consecutive, a short lin (called a leger line) is placed between the two staves. Mi dle C is on this line, and is equally related to both stave being the line above the F staff, and the line below the G staf

The combined Bass and Treble Staves are lettered as fo lows when the F and G clefs are used:

Ex. 9



Questions on Chapter Four

1. What is the meaning of the word Clef?
2. What does the clef sign do?
3. How many clef signs are in common use at the present time?
4. From what did the clef signs originate?
5. Explain the G clef; what other name has it?
6. How many letters of the alphabet are used in music?
7. Explain the F clef; what other name has it?
8. Name two voices and three instruments, the music for which is written on the G staff.
9. Name two voices and three instruments, the music for which is written on the F staff.
10. Explain the C clef; what other names has it?
11. Upon which line is the Alto clef placed?
12. Upon which line is the Tenor clef placed?

Ear-training for Chapter Four

Teacher plays single tones, also two, three, and four tones simultaneously; students endeavor to recognize the number of tones that are being sounded. At this early stage, the tones should be well spaced, consisting largely of the common major and minor chord tones, and kept in the middle register of the piano.

Written Work

Practice drawing the G clef.
Practice drawing the F clef.
Practice drawing the Alto clef.
Practice drawing the Tenor clef.
Letter each line and space of the G staff.
Letter each line and space of the F staff.
Letter each line and space of the Alto staff.
Letter each line and space of the Tenor staff.
Letter each line and space of the combined F and G staves

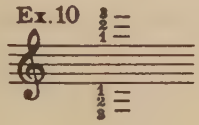
CHAPTER V

Leger Lines

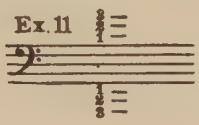
Lines may be added (thereby creating additional spaces) above and below the staff to indicate the pitch of tones higher and lower than can be shown by the regular five-line staff. These added lines are short, and are called **Leger Lines** (from the French *légère,* meaning light).

The Leger Lines are numbered upward when added above the staff, and downward when added below the staff.

Ex.10

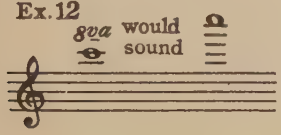


Ex.11

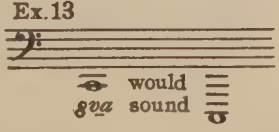


As a great number of leger lines would increase the difficulty in reading, the sign 8va is used to indicate higher or lower pitches. When 8va is over the notes, it indicates that the tones are to be sounded an Octave (or 8 tones) higher than written. When 8va is placed under the notes, it indicates that the tones are to be sounded an Octave lower than written.

Ex.12



Ex.13



Pitch in music, then, (the highness or lowness of tones) is indicated positively and absolutely by the use of the **Staff, Clefs** and **8va.**

Questions on Chapter Five

1. What are Leger Lines? Why used?
2. How are they numbered?
3. Explain the meaning of 8va over or under a note. Why used?

Ear-training for Chapter Five

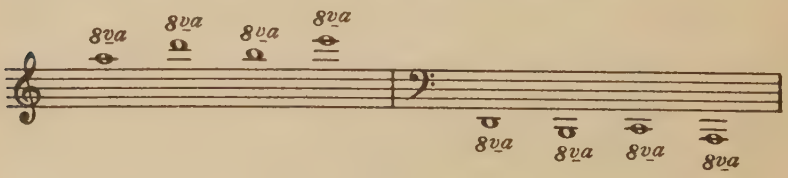
Continue as in Chapter Four, but with increasingly difficult combinations. The tones may be nearer together and played in the higher and lower registers of the piano.

Written Work

Add three lines above and three below the G staff. Number and letter them.

Add three lines above and three below the F staff. Number and letter them.

Write the following pitches as they actually sound.



CHAPTER VI

Notes and Rests

In our study of the first chapters, we have seen how a composer is enabled to indicate to the eye the pitch (or highness and lowness) of the tones in the music he is creating. This is done by means of the Staff, Clef signs, and 8va. We know that the tones of music, besides being of different pitches, sometimes sound long and sometimes short, and that often between tones there are silences.

The teacher plays or sings, or has the students sing, parts of several familiar melodies, leading them to discover which of the tones are long (comparatively) and which are short, and also where silences occur.

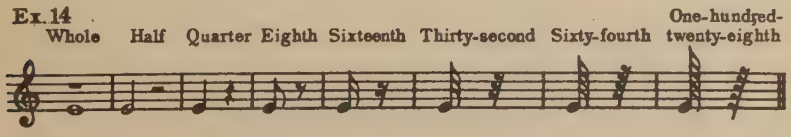
As you learned in Chapter Two, the length of a tone is called Duration.

To indicate this Duration of sound and silence, symbols called Notes and Rests are used.

These notes and rests are of different values (in duration) according to their shape and appearance.

The following table shows the different notes and their corresponding rests.

Ex. 14



Notice the position of the whole and half-rests. The whole-rest is made **below** the **fourth** line, the half-rest is made **above** the **third** line. The following diagram shows the relative value of the notes. The relative value of the rests would be the same.

Ex. 15

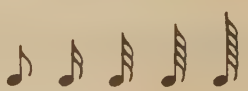
A note has sometimes one, sometimes two, and sometimes three Parts: (1) Head; (2) Stem; (3) Flag or Hook.

The Whole-note (𝅝) has the head only.

The Half-note (𝅗𝅥) has a head and stem.

The Quarter-note (♩) has a head and stem.

The remaining notes have a head, stem and one or more flags or hooks.



The Whole and Half-notes have an Open head. The heads of the others are filled in.

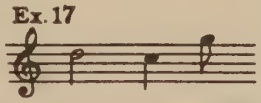
The shape of the head is Oval.

When there is a single melody on a staff, the notes **below** the **third** line have their **stems** at the **right** of the head, the stems pointing upward.

Ex. 16

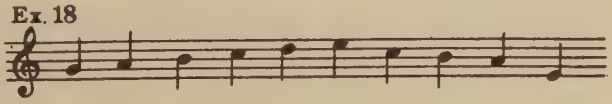
Notes **above** the **third** line have their **stems** at the **left** of the head, and point downward.

Ex. 17

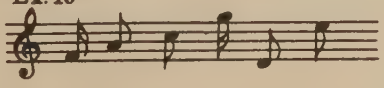


When notes are **on** the **third** line, **stems** may point **either way,** this being determined by the position of the preceding and following notes.

Ex. 18



Flags (or Hooks) are **always** on the **right** of the stems.

Ex. 19

QUESTIONS ON CHAPTER SIX

1. How is the duration of a tone or silence indicated?
2. What determines the **kind** of note or rest?
3. What are the parts of a note?

4. Describe the whole-note, half-note, quarter-note, eighth-note, sixteenth-note, thirty-second-note, sixty-fourth-note, one-hundred-and-twenty-eighth-note.
5. Describe each of the different rests.

There should be a thorough drill on notes and rests.
Example:

How many equal a

How many equal a

How many equal a

How many equal a

How many equal a

Ear-training for Chapter Six

Continue as in Chapter Five. Students must learn to concentrate on what they hear—passive listening is not enough.

Written Work

Place the following notes; remember the rules for stems:
A half-note on the first line.
A quarter-note in the third space.
An eighth-note on the second line.
A sixteenth-note in the fourth space.
A thirty-second-note in the first space.
A one-hundred-and-twenty-eighth-note on the third line.
Place the half-rest in its proper place.
Place the whole-rest in its proper place.

CHAPTER VII

Bars

Bars are vertical lines drawn through the staff.

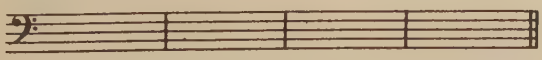
Bars serve two purposes: to indicate the Principal Accent (the beat after the bar is the strongest accent and occurs regularly), and to divide the music into **measures.**

An accent in music is an emphasis or stress on certain tones, just as in speaking we accent or emphasize certain words.

A Double-Bar consists of two vertical lines, one of the lines (the second) often heavier (thicker) than the other. The double-bar marks the end of a division, movement, or entire composition.

A Measure of music is the distance between two bars.

Ex. 20



Questions on Chapter Seven

1. What are bars?
2. Where are single bars used?
3. What are the functions of bars?
4. Where are double-bars used?
5. What is a measure in music?

Ear-training for Chapter Seven

Continue as in Chapter Six. Stress minor seconds and oc-

taves. Teacher plays bits of familiar compositions, strongly accenting the first beat in each measure. Class to recognize the beginning of a new measure and the end of the preceding measure, hence the location of the bar.

CHAPTER VIII

The Scale in Music

The word **Scale** comes from the Latin *scala*, meaning a staircase or ladder. The tones of the scale are arranged one above the other much the same as the rungs of a ladder. A Scale is **a series of tones arranged in a definite order.** The history of scales is intensely interesting. For an authentic account, see Chapter Two in *The Evolution of the Art of Music* by Parry. It is sufficient for our present needs, however, to know that different countries have scales with a varying number of tones. For instance: the Chinese have a five-tone scale called the Pentatonic scale. The Hindus, on the other hand, have a thirty-two tone scale.

Our Major and Minor scales consist of **seven** tones.
There are three scales in common use:

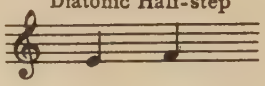
1. The **major** scale, made up of steps and half-steps (or tones and half-tones).
2. The **minor** scale, made up of steps and half-steps.
3. The **chromatic** scale, made up entirely of half-steps.

A half-step is the distance from a given tone to the next higher or lower tone. This can be easily seen on the piano. Where two white piano keys come together, from one to the other is a half-step. When a white and black key are next each other, from one to the other is a half-step. In other words, when you start anywhere on the piano and play the white and black keys in consecutive order, you are playing half-steps.

A whole-step consists of two half-steps.

There are two kinds of half-steps: **Diatonic** and **Chromatic.** A Diatonic half-step is one in which two staff degrees (lines and spaces) are involved.

Ex. 21
Diatonic Half-step



A Chromatic half-step may be on the same line or in the same space.

Ex 22
Chromatic Half-step

The difference between scales lies in the **arrangement** of the steps and half-steps.

The modern European scale (used of course in America, since early American music was influenced entirely by European music) is a **seven-tone scale** (Major and Minor).

Most of the simple music we meet is made of the tones of the seven-tone scale. Five of these seven tones, however, can be altered, that is: **raised** or **lowered,** thus dividing a whole-step into two sounds or tones. This adds five more tones within the octave.

An **Octave** is the distance from one "Do" to the next higher or lower "Do" of the same letter name. Thus we have **twelve different tones** at our command, and out of these twelve tones is made the music of the masters. These twelve tones, can, of course, be repeated higher or lower, thus giving the im-

pression that we are hearing a great many different tones. Such, however, is not the case. If an orchestra or chorus of a hundred members are all playing or singing simultaneously, not more than twelve **different** tones are possible, usually many less than twelve are sounding.

Questions on Chapter Eight

1. From what does the word scale come?
2. What is a scale?
3. Do scales in all countries have the same number of tones?
4. How many tones are there in our Major and Minor scales?
5. How many scales are there in common use?
6. Of what is the Major scale made up?
7. Oh what is the Minor scale made up?
8. Of what is the Chromatic scale made up?
9. What determines the difference between scales?
10. What is an Octave?
11. Out of how many tones is most music made?
12. What is a half-step in music?
13. What is a Diatonic half-step?
14. What is a Chromatic half-step?

Ear-training for Chapter Eight

Teacher plays short successions of single tones; students answer as to how many tones were played.

CHAPTER IX

CHROMATICS

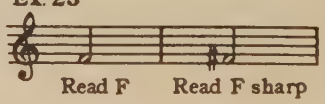
Before taking up the study of the three scales (major, minor, and chromatic), it is necessary to study the subject of **Chromatics** (sometimes called Accidentals), since a thorough knowledge of these is essential before we can write or play the scales in the different keys.

The alteration of the pitches of tones of the Major scale is brought about by the use of symbols called chromatics.

There are **five** of these chromatic signs:

1. The **Sharp** (♯).
2. The **Double-Sharp** (𝄪).
3. The **Flat** (♭).
4. The **Double-Flat** (𝄫).
5. The **Natural**, or **Cancel** (♮).

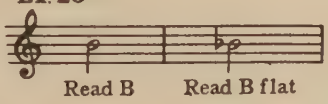
A Sharp is a sign placed before (at the left of) a note to **raise** the **pitch** of a tone a **half-step**, retaining the same letter name.

Ex. 23

A Double-Sharp is a sign placed before a note to **raise** the **pitch** of a tone a **whole-step**, retaining the same letter name.

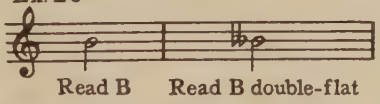
Ex. 24

A Flat is a sign placed before a note to **lower** the **pitch of** a tone a **half-step,** retaining the same letter name.

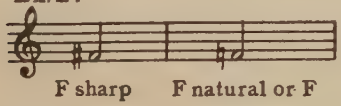
Ex. 25



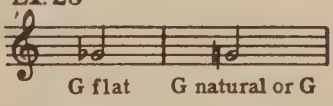
A Double-Flat is a sign placed before a note to **lower** the **pitch** of a tone a **whole-step,** retaining the same letter name.

Ex. 26

A Natural (or Cancel) is a sign placed before a note to **restore** the note to its **original** pitch: it cancels the effect of the sharp, flat, double-sharp or double-flat previously used.

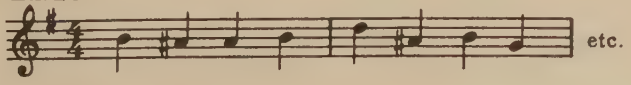
Ex. 27



Ex. 28



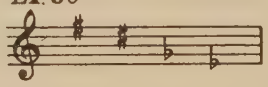
A Chromatic sign continues in force throughout the measure.

Ex. 29

In the above example, the second note (A) is sharped; the third note (A) would also be played or sung as A sharp, but would not require the sharp sign written before it. A Bar cancels the chromatic sign, so that if, in the second measure, we wished the A sharped, it would be necessary to write the sharp again before the note.

When a note is natural, to **raise** the pitch use a **Sharp.**
When a note is already sharped, to **raise** the **pitch** u
Double-Sharp.
When a note is natural, to **lower** the pitch use a **Flat.**
When a note is already flatted, to **lower** the pitch u
Double-Flat.
When a note is sharped, to **lower** the pitch use a **Natural.**
When a note is flatted, to **raise** the pitch use a **Natural.**
To **cancel** completely a double-sharp or a double-flat, u
Natural.

When chromatics are written on a line of the staff, the
should pass exactly through the middle of the sign.

Ex. 30

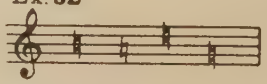


When chromatics are written in a space of the staff,
lower part of the flat should occupy the entire space, and
cross-lines of the sharp should take in the whole width o
space.

Ex. 31

The natural should appear as follows:

Ex. 32



QUESTIONS ON CHAPTER NINE

1. Name the five chromatic signs.
2. Define the sharp.

3. Define the double-sharp.
4. Define the flat.
5. Define the double-flat.
6. Define the natural.
7. What should be the position of a sharp, flat, and natural when placed on a line of the staff?
8. What should be the position of a sharp, flat, and natural when placed in a space of the staff?

Ear-training for Chapter Nine

(a) Teacher plays whole and half-steps. Students to recognize which are being played.
(b) Teacher announces, "These are natural tones," and after them plays a tone a half-step higher or lower. Students to answer "sharped," "flatted," etc.
(c) Teacher announces, "These tones are already sharped," and plays after them a tone a half-step higher or lower. Students answer "double-sharped," "natural," etc.
(d) Teacher announces, "These tones are already flatted," and after them plays a tone a half-step higher or lower. Students answer "natural," "double-flatted," etc.

Written Work

1. Write a sharp on the lines and in the spaces of the staff as directed:
On the 5th line.
In the 3rd space.
On the 4th line.
In the 2nd space.
In the 4th space.
On the 3rd line.

2. Write a flat on the lines and in the spaces of the staff as directed:

On the 3rd line.
In the 4th space.
In the 2nd space.
On the 4th line.
On the 2nd line.
In the 3rd space.
In the 1st space.
In the space below the staff.
In the space above the staff.

3. Write a double-sharp in the 1st space.
   Write a double-sharp in the 3rd space.
   Write a double-flat on the 3rd line.
   Write a double-flat in the 4th space.

4. Write a natural on each line and in each space.

CHAPTER X

The Major Scale

Major and Minor scales are often spoken of as **Diatonic** scales. The word Diatonic means "through the tones." A Diatonic scale is one which proceeds by whole and half-steps, as distinguished from the Chromatic scale which proceeds entirely by half-steps. The one exception to this principle is in the progression 6 to 7 in the Harmonic minor scale, which is a step-and-a-half. The written Diatonic scale has one note to a line or space, while the Chromatic scale may have two notes (of different pitch) on the same line or in the same space. We will begin our study of scales with the **Major** scale. The Major scale has a **definite pattern,** as follows:

whole step, whole step, half-step, whole step, whole step, whole step, half-step.
1,.....2,.....3,.....4,.....5,.....6,.....7,.....8,

There is **one,** and **only one,** Major Scale, and the **pattern never varies.**

Examining the scale pattern, it will be seen that the two halves are **exactly alike.**

First half:

Whole-step, whole-step, half-step.

Second half:

Whole-step, whole-step, half-step.

The two halves are connected by a whole-step. Each half is called a Tetrachord, meaning four tones.

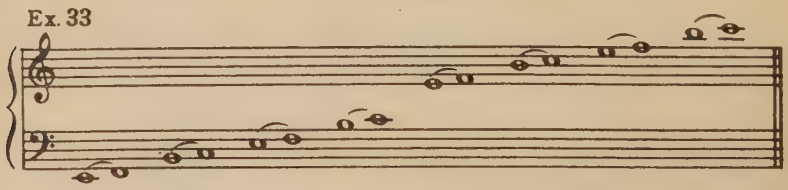
The scale can be constructed from each of the **twelve pitches** within the octave.

Each time, a new **key** (but not a new scale) results, according to the tone from which we start. It is the same scale in every case, simply transposed higher or lower.

To master the Major scale, the first thing for the student to do is to **memorize** the **pattern;** keeping in mind that there is a whole step between all of the tones except 3-4 (Mi-Fa) and 7-8 (Ti-Do), where there is a **half-step.**

The second point to learn and **remember** is the location of the half-steps on the staff.

The **half-steps** on the staff are **always** between E-F, and B-C. Between all other lines and spaces is a **whole-step.**

Ex. 33

The third point to keep in mind is the **function** of the Chromatic signs.

With these **three points** thoroughly learned, the student should experience little or no difficulty in writing the Major scale from any pitch (i. e. in any key).

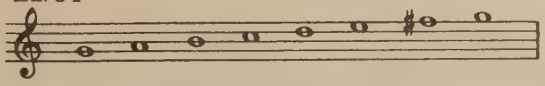
A careful study of the diagram and chart in Appendix C will make clear the necessity for using sharps and flats in all of

the keys except C. In the key of C, no chromatics are required because 3-4 and 7-8 of the scale (which, according to the pattern must be half-steps) **do fall** on E-F and B-C which **are** half-steps.

Beginning on any other pitch than C, throws the Natural half-steps (E-F, B-C) in the wrong place, so that we sometimes have to "push" the pitch of the tone up, or "pull" it down a half-step with a chromatic sign (sharp or flat) in order to make the distance from note to note conform to the unvarying pattern.

Let us build the Major scale, beginning on G, (2nd line, treble staff). Think (1) of the scale pattern, and (2) where the half-steps are on the staff.

From the first note to the second note is a whole-step, G to A.
From the second note to the third note is a whole-step, A to B.
From the third note to the fourth note is a **half**-step, B to C.
From the fourth note to the fifth note is a whole-step, C to D.
From the fifth note to the sixth note is a whole step, D to E.
From the sixth note to the seventh note is a whole step, E to F♯.
From the seventh note to the eighth note is a **half**-step, F♯ to G.

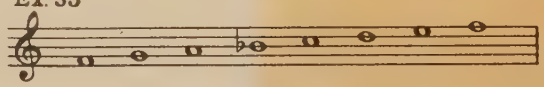
Ex. 34

Building our scale from G, all goes well until we get to the 7th note. Our pattern shows there must be a **whole**-step between 6-7, but, 6-7 fall on E-F which is a **half**-step. To make

the whole-step, we raise the pitch of F with a sharp (♯), thus conforming to the scale pattern.

We will construct the scale from one more pitch, this time from F (1st space, treble staff).

From the first note to the second note is a whole-step, F to G.
From the second note to the third note is a whole-step, G to A.
From the third note to the fourth note is a **half**-step, A to B♭.
From the fourth note to the fifth note is a whole-step, B♭ to C.
From the fifth note to the sixth note is a whole-step, C to D.
From the sixth note to the seventh note is a whole-step, D to E.
From the seventh note to the eighth note is a **half**-step, E to F.

Ex. 35



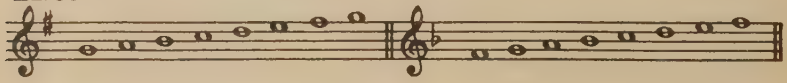
In the above we were obliged to flat the B to bring it within a half-step of the 3rd note, A.

Building the Major scale from any given pitch will give the number of sharps or flats necessary in the **key-signature.**

A **key-signature** is the sharp or flat or group of sharps or flats placed at the beginning of a line of music. The key-signature is placed immediately after the Clef.

In the above keys, G and F, in which we built the scale, the key-signatures would appear as follows:

Ex. 36



The sharp on the fifth line (F) indicates that the note F must be sharp. The flat on the third line (B) indicates that the B must be flat.

Questions on Chapter Ten

1. How many tones are there in the Major scale?
2. What are the distances between each of these tones and the next one in the scale?
3. Recite the Major Scale Pattern.
4. How many major scales are there? Does the pattern ever vary?
5. From how many pitches may the major scale be constructed?
6. In studying the major scale what are the three important points to keep in mind?
7. Where do the half-steps between natural notes occur on the staff?
8. Where do the half-steps occur in the scale pattern?
9. Think of the Bass Staff:

What is the distance from the 1st line to the 1st space?
What is the distance from the 1st space to the 2nd line?
What is the distance from the 2nd line to the 2nd space?
What is the distance from the 2nd space to the 3rd line?
What is the distance from the 3rd line to the 3rd space?
What is the distance from the 3rd space to the 4th line?
What is the distance from the 4th line to the 4th space?
What is the distance from the 4th space to the 5th line?

10. Think of the Treble Staff:

What is the distance from the 1st line to the 1st space?
What is the distance from the 1st space to the 2nd line?

What is the distance from the 2nd line to the 2nd space?
What is the distance from the 2nd space to the 3rd line?
What is the distance from the 3rd line to the 3rd space?
What is the distance from the 3rd space to the 4th line?
What is the distance from the 4th line to the 4th space?
What is the distance from the 4th space to the 5th line?

Written Work

Write the Major Scale in the following keys, first without key-signature, then with key-signature:
C, G, D, A, E, B, F♯, C♯, F, B♭, E♭, A♭, D♭, G♭, C♭.
Model, E♭:

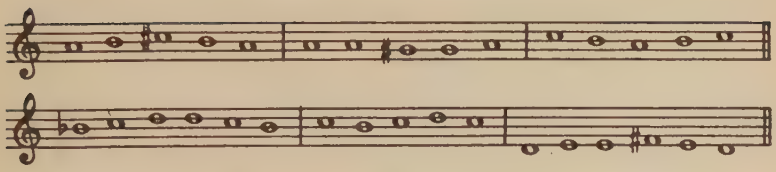
Ear-training for Chapter Ten

Teacher plays whole and half-steps. Students answer "whole," "half," "half," "whole," etc.

Teacher announces a definite pitch and plays simple progressions of whole and half-steps. Students answer with letter names. Example: Teacher: "I am beginning on G." Students answer, "up a whole step to A," "down a whole step to G," "down a half-step to F♯," "up a half-step to G."

Ex. 37

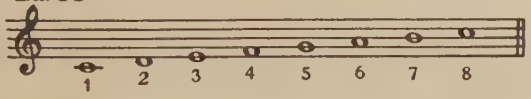
For the present, only tones of the major scale are used (no accidentals).



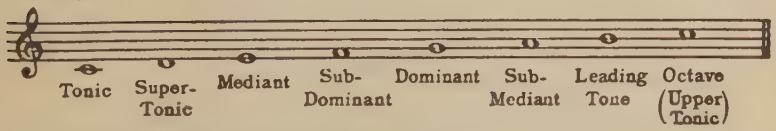
The thought process of analysis of the steps and half-steps should be gone through each time. The student should try to visualize the staff or keyboard in giving his answers.

Besides syllable and letter names, each tone of the scale may be designated by a number and by a specific technical name.

Ex. 38



Ex. 39



Explanation of the technical names:

Tonic (Latin *tonus*). The tone (Do), or keynote around which the other tones of the scale are grouped, and to which they are all related.

Supertonic (Latin *super*). Above or Over the Tonic.

Mediant (Latin *medians*). Between; lying between the Tonic and Dominant.

Subdominant (Latin *sub*). The Under Dominant, the fifth tone below the Tonic.

Dominant (Latin *dominus*). The Governing or Ruling tone, the fifth tone above the Tonic.

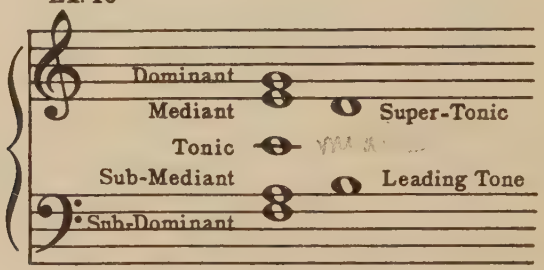
Submediant. Midway between the Tonic and Subdominant.

Leading-tone. Leading up, and demanding a progression to the Tonic.

Octave (Latin *octava*). The Eighth or Completing tone.

The following diagram will make clear the relationship between the various scale-tones.

Ex. 40



ADDITIONAL EAR-TRAINING EXERCISES FOR CHAPTER TEN

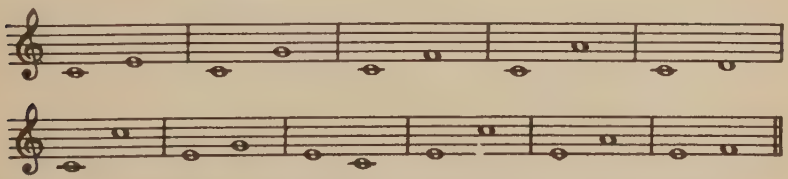
The teacher names the key, and plays the following intervals: students answer with syllable, number and letter names. The teacher will frequently sound the keynote.

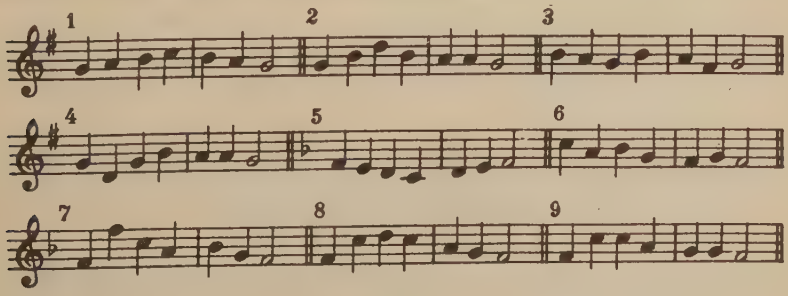
Example: Teacher announces, "Key of C, 'Do' on the line below the treble staff," then plays

Students answer, "Do-Mi, 1-3, C-E."

Teacher: "key of E, 'Do' on first line, treble staff," and plays

Students answer: "Do-Mi, 1-3, E-G♯."

A thorough drill should be given in all the major keys, using the following exercises:

The teacher plays or sings short phrases; students recite and sing, first with syllables, then with numbers, and finally with degree names (Tonic, Dominant, etc.). The following are suggested; the teacher may invent others.

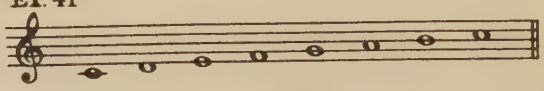


CHAPTER XI

The Minor Scale

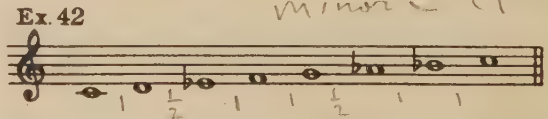
There has been much controversy among theorists regarding the Minor Scale—whether to call the first tone La (or 6), thereby recognizing a relationship to, and a dependence on, the Major Scale three half-steps above—or, whether to call the first tone Do (or 1) thus considering it a separate and independent scale, the key-signature resulting being merely the outcome of the arrangements of the steps and half-steps which go to make up the Minor scale.

Ex. 41



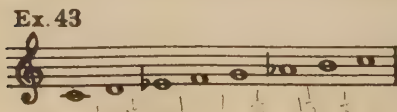
The above is the major scale of C, which has no sharps or flats (no key-signature).

Ex. 42

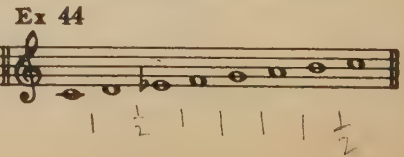


The second example is the minor scale from C in one of its forms (pure), and although, in this particular form, three of the notes are flatted, thus giving the same signature as E♭ major, yet the key is clearly C minor, and has nothing to do with E♭ major (except in so far as all keys have some relationship, close or remote). When it comes to the Harmonic and Melodic forms of the minor, there is less in the major signature which would warrant the first tone being called La (or 6).

Ex. 43



Ex 44



In the Harmonic form there are two notes flatted (which would suggest B♭ major), if one of the flatted notes were B♭, while in the Melodic form there is only the one flat (E♭) which would not suggest any major key in the absence of a B♭. Theoretically, C major and C minor should be considered as being the **same** in **key tonality,** but **different** in **mode** or **color.**

However, the reading of music in the public schools is based largely on the use of the Latin syllables, the major scale being the first complete unit learned by the child, and until the time arrives when he is taught the major and minor scales simultaneously, showing the definite relationship between the **Tonic** major and minor, the procedure of basing the minor scale upon the Relative major will probably continue.

In this chapter the minor scale will be presented both ways.

The Minor scale consists of the same number of tones (7) as the Major.

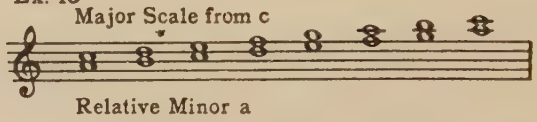
The difference between the major and minor scale lies in the arrangement of the steps and half-steps.

The chief characteristic of the minor scale is the **lowered third tone** in the lower tetrachord, and the various alterations in the upper tetrachord.

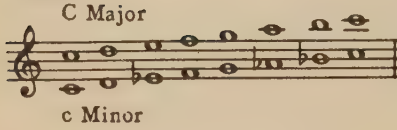
The minor scale has a definite relationship to the major scale. It may begin on the **sixth** tone of a given major scale, in

which case the key-signature of both will be the same. This is called the **Relative** minor. Or the minor may begin on the **same tone** as a given major, in which case the key-signature will be the same as that of the major three half-steps above. This is called the **Tonic** minor.

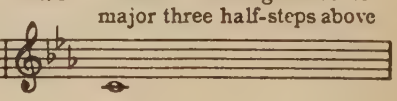
Ex. 45



Ex. 46



Ex. 47 C Minor with signature of major three half-steps above



There are **three forms** of the minor scale:

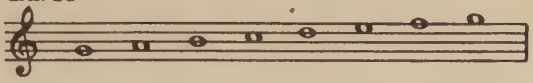
1. Pure (or Normal) minor.
2. Harmonic minor.
3. Melodic minor.

The Pure (or normal) minor is made up of the **same tones** as its relative major; the only difference in the two being that, whereas the major begins on 1 and ends on 8 (Do to Do), the minor begins on 6 and ends on 6 (La to La).

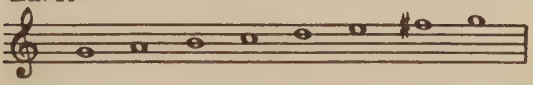
We found that the 7th (or leading tone) in the major scale was a half-step from its tonic. This is desirable and necessary as it gives a feeling of finality and completeness when we play or sing the upper tonic.

Listen to the following and decide which is the more satisfactory:

Ex. 48

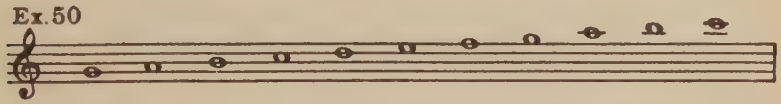


Ex. 49



In Example 48, we seemed to stop without arriving at our destination, we feel the need of going on like this:

Ex. 50

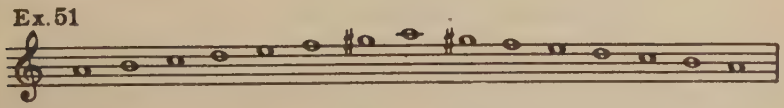


In Example 49, however, when we reach the high G, we have a feeling of repose and completeness.

One characteristic of all scales; Major, Minor and Chromatic, is that the Leading-tone (the tone just below the Tonic) is a half-step away from the Tonic (Do).

The Harmonic minor, to get this half-step, or leading-tone, has its 7th tone **raised a half-step,** both **ascending** and **descending.**

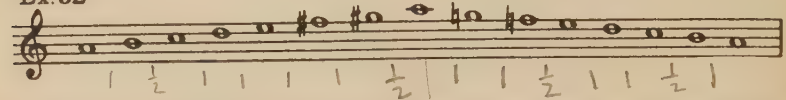
Ex. 51



The Melodic minor has its 6th and 7th tones **raised a half-step ascending,** but usually **descends** like the Pure minor, though a Mixed form is sometimes used, with the 6th and

7th tones raised a half-step in ascending, and keeping to the Harmonic form in descending.

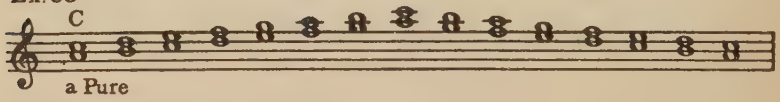
Ex. 52



At one time in the history of music, before vocal technique had reached the present state of development, it was considered difficult to sing the interval of a step-and-a-half, for example F to G♯, so the 6th tone of the minor scale was raised to conform to the major scale.

Relative Major and Minor

Ex. 53

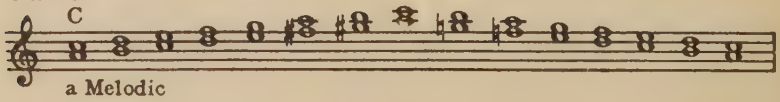


a Pure

Ex. 54

a Harmonic

Ex. 55



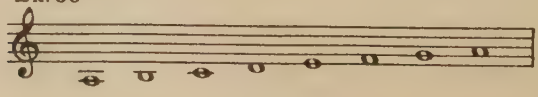
a Melodic

Pattern for the **Pure Minor** scale

whole step, half-step, whole step, whole step, half-step, whole step, whole step.

1,.....2,.....3,.....4,.....5,.....6,.....7,.....8.

Ex. 56



Pattern for the **Harmonic Minor** scale

whole step, half-step, whole step, whole step, half-step, step-and-a-half, half-step

1,.....2,.....3,.....4,.....5,.....6,.....7,.....8.

Ex. 57

Pattern for the **Melodic Minor** scale

whole step, half-step, whole step, whole step, whole step, whole step, half-step.

1,.....2,.....3,.....4,.....5,.....6,.....7,..... 8.

Ex. 58

Questions on Chapter Eleven

1. How many tones are there in the Minor scale?
2. What is the chief characteristic of the Minor scale?
3. How many forms of the Minor scale are there? Name them.
4. What is the relationship between the Minor and Major scale?
5. What is meant by Relative Major and Minor?
6. What is meant by Tonic Major and Minor?
7. Define the Pure or Normal Minor scale.
8. Define the Harmonic Minor scale.
9. Define the Melodic Minor scale.

Ear-training for Chapter Eleven

The teacher plays Major and Minor scales in various keys; students to decide which is Major and which is Minor.

After the student can clearly distinguish Major and Minor, the teacher plays different forms of the Minor (Pure, Har-

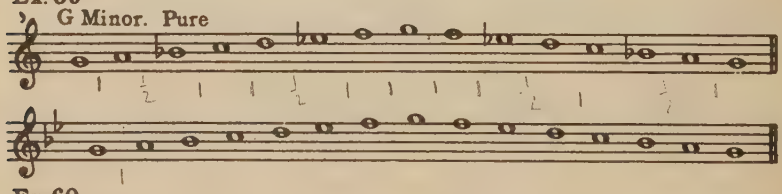
monic, and Melodic), at first all three forms from the same Tonic, i. e. Pure from C, Harmonic from C, Melodic from C. Later the teacher plays the various forms in different keys, such as: Pure from F♯, Harmonic from E, Melodic from A, etc. This work should be continued until the student can distinguish with absolute certainty the three forms of the Minor scale when started from any pitch.

Written Work

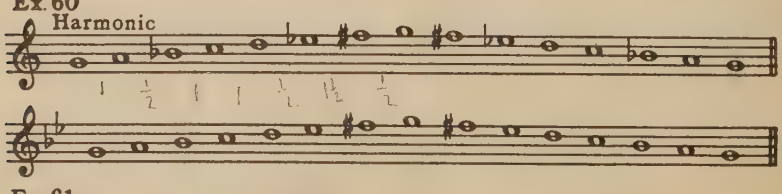
Write the three forms of the Minor scale in the following keys: A-E-F♯-C♯-G♯-D♯-A♯-D-G-C-F-B♭-E♭-A♭.

Write each scale, first **without signature,** then **with signature** in the manner of the following examples:

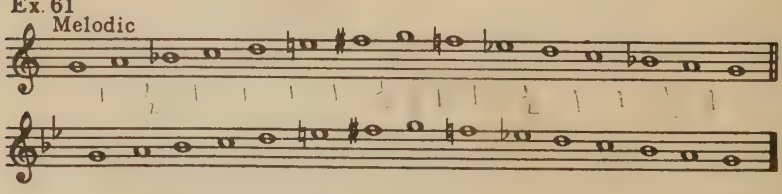
Ex. 59
G Minor. Pure



Ex. 60
Harmonic



Ex. 61
Melodic



CHAPTER XII

The Chromatic Scale

The word **Chromatic** comes from the Greek word *chroma*, meaning color. The **Chromatic** tones add color and richness when used in conjunction with the tones of the Diatonic Scale.

The Chromatic scale may be written in various ways, and composers have been careless in their writing of it; but since music reading based on the Latin syllables employs one standardized form, we will confine ourselves to that form for the present, leaving the students to learn of other forms when they take up the study of Harmony.

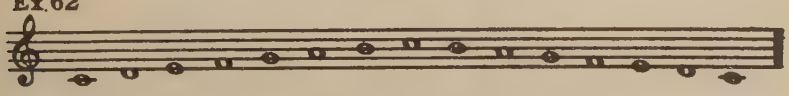
The Chromatic Scale is composed of **twelve half-steps.**

To write, play or sing the Chromatic scale **ascending** (from any pitch) **add** to the Diatonic (Major) Scale five notes got by chromatically **raising** 1, 2, 4, 5, 6, (Do, Re, Fa, Sol, La).

Descending: add to the Diatonic Scale five notes got by chromatically **lowering** 7, 6, 5, 3, 2, (Ti, La, Sol, Mi, Re).

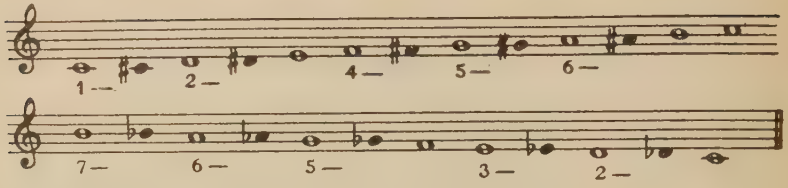
The Diatonic scale ascending and descending from C:

Ex. 62



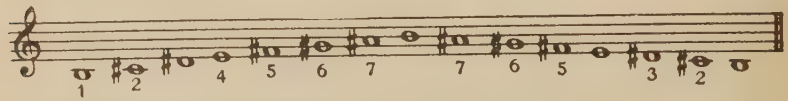
The Chromatic scale ascending and descending from C:

Ex. 63



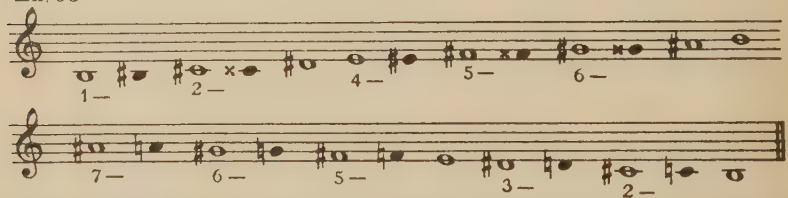
The Diatonic scale from B:

Ex. 64



The Chromatic scale from B:

Ex. 65



In writing the Chromatic scale, keep in mind the function of the Chromatic signs (♯, 𝄪, ♭, 𝄫, ♮).

(a) To raise a natural note, use a sharp.

(b) To raise a sharped note, use a double-sharp.

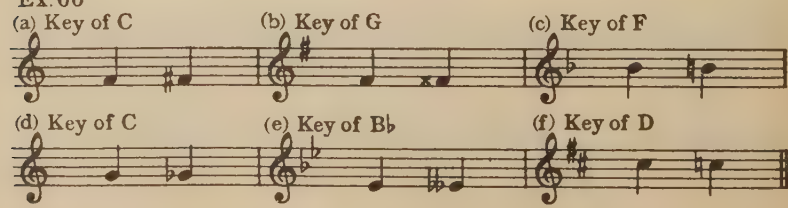
(c) To raise a flatted note, use a natural.

(d) To lower a natural note, use a flat.

(e) To lower a flatted note, use a double-flat.

(f) To lower a sharped note, use a natural.

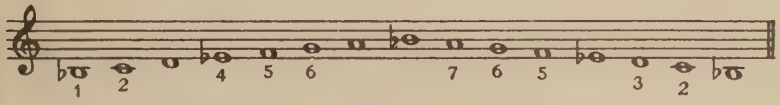
Ex. 66



In measure (a), the F is natural; to raise the pitch we sharp F.
In measure (b), the F is already sharped; to raise it we use a double-sharp.
In measure (c), the B is already flatted (key of F); to raise it we use the natural.
In measure (d), the G is natural; to lower the pitch we flat the G.
In measure (e), the E is already flatted (key of B♭); to lower it we use the double-flat.
In measure (f), the C is already sharped (key of D); to lower it we use the natural.

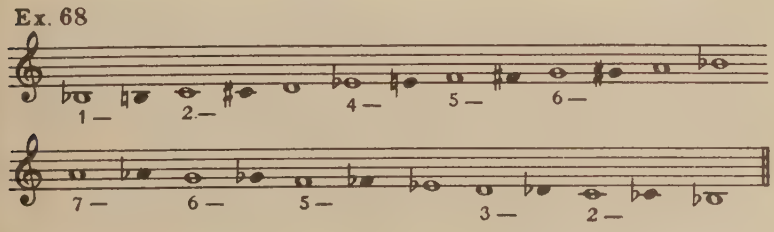
The Major Scale from B♭:

Ex. 67



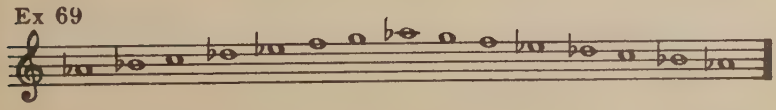
The **Chromatic Scale** from B♭:

Ex. 68



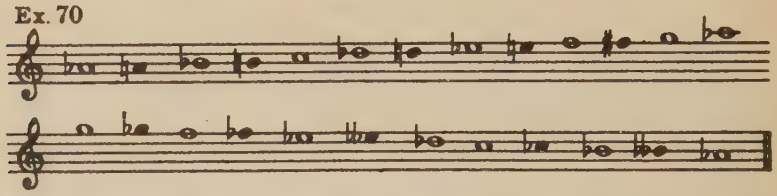
The Major Scale from A♭:

Ex 69



The Chromatic Scale from A♭:

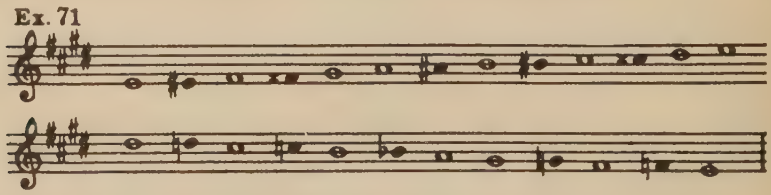
Ex. 70



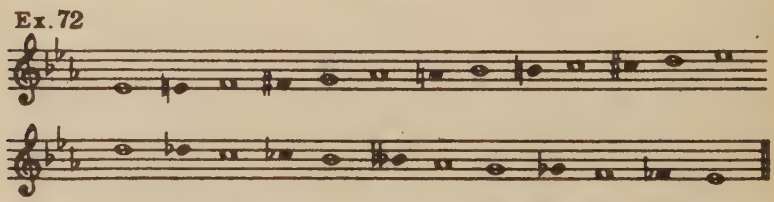
The Chromatic Scale may be written from any pitch; the Key-Signature will be that of the Major Key of the chosen pitch.

The Chromatic Scale from E with key-signature:

Ex. 71



The Chromatic Scale from E♭ with key-signature:

Ex. 72

Questions on Chapter Twelve

1. What does the word Chromatic mean?
2. How many tones are there in the Chromatic scale?
3. Which tones of the Major (Diatonic) scale are raised in ascending in the Chromatic scale?
4. Which tones are lowered in descending?
5. To raise a natural note, what do you do?

6. To raise a sharped note, what do you do?
7. To raise a flatted note, what do you do?
8. To lower a natural note, what do you do?
9. To lower a flatted note, what do you do?
10. To lower a sharped note, what do you do?
11. In writing the Chromatic scale from a given pitch, what key-signature is used?

Ear-training for Chapter Twelve

Review exercises in Chapter Nine.

Students sing the Chromatic scale from different pitches; pay strict attention to intonation. Test pitch with piano or pitch-pipe.

Written Work

Write the Chromatic Scale (using quarter-notes) from the following pitches, first without key-signature, then with key-signature: G, G♭, B♭, F♯, D♭, D, C♯, F, E♭, C♭, A.

CHAPTER XIII

METER

Music is measured by **Time,** indicated by the **Beat** or by the **Accent.**

The tones of music are divided into groups which are called Measures.

The first tone of each group is stressed or emphasized, and it is this regular recurrence of stress or accent which determines Meter.

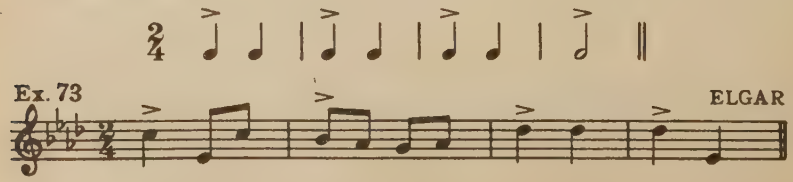
Meter, then, may be defined as grouping according to **a definite number of regularly recurring beats or pulses.**

Meter governs the number of Beats in a measure; the Size of the measure.

Primarily there are only two kinds of Meter: **Duple** and **Triple,** or Meters of **twos** and **threes,** although **Quadruple** is usually regarded as a distinct meter.

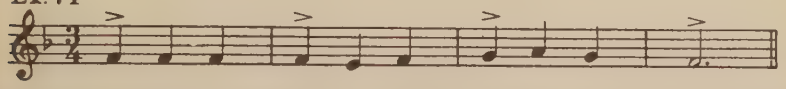
All other meters are combinations of the above three.

Duple meter: a strong or stressed beat followed by a weak or relaxed beat.

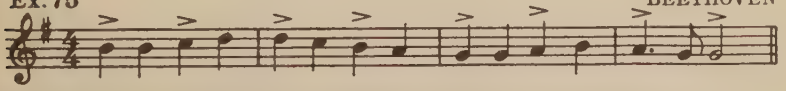


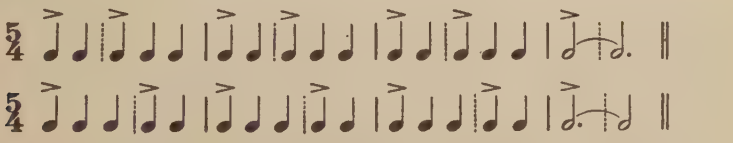
Triple meter: an accented or stressed beat followed by two unaccented or relaxed beats.

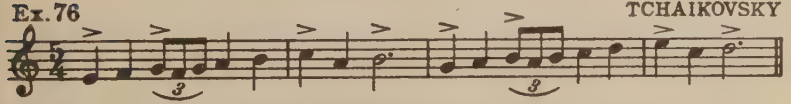
Ex. 74



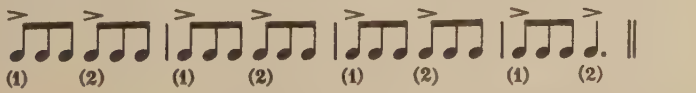
Quadruple meter: with the principal accent on the first beat, and a secondary accent on the third beat.

Ex. 75 BEETHOVEN

Compound meters are combinations of these three.

Meters of **five** are a compound of Duple and Triple, or Triple and Duple.

Ex. 76 TCHAIKOVSKY

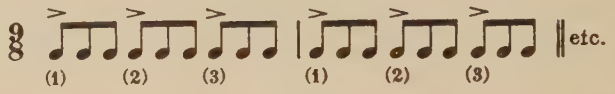


Six is a compound Duple with accents on **one** and **four.**

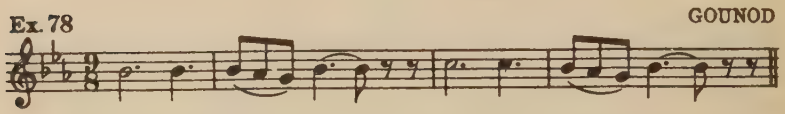


Ex. 77

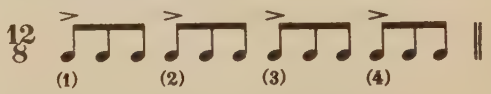
Nine is a compound Triple with the principal accent on one, and a light accent on **four** and **seven.**



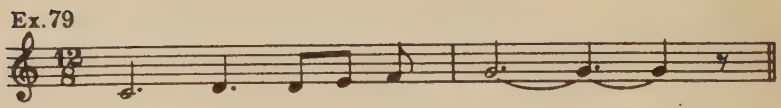
Ex. 78



Twelve is a compound Quadruple with the principal accent on **one,** and light accents on **four, seven** and **ten.**



Ex. 79



Irregular meters such as Seven, Eleven, Fifteen, etc., are encountered occasionally in modern music, but since so comparatively little music employs them, they need not concern us at this time.

The Duplet, Triplet, Quintolet

Besides irregular meters, there are irregular **groupings** of notes within the regular meters.

The three most used are the Duplet, the Triplet and the Quintolet.

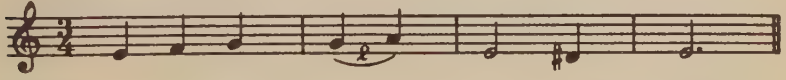
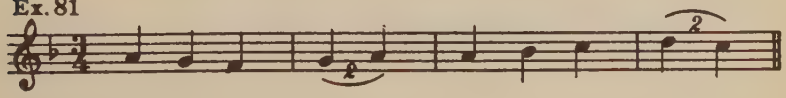
A Duplet is two notes played or sung in the time normally given to three notes of the same kind. A quarter-note would

naturally receive one beat in ¾ meter, and it would take three of these quarter-notes to fill a measure; the second measure, however, in Example 80 contains a Duplet consisting of **two** quarter-notes, and these two quarter-notes fill the same time as three quarter-notes would under ordinary conditions.

In other words, we made **two** notes take the same amount of time as is normally given to **three.**

In Example 80, each note of the Duplet receives a beat and a half.

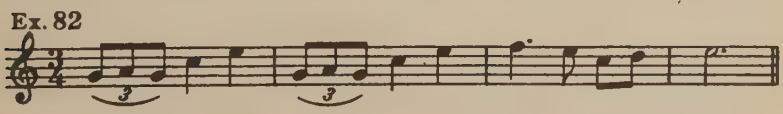
A Duplet is indicated by a curved line (or a bracket) and a figure 2 over or under the notes.

Ex. 80

Ex. 81

A Triplet is a group of three notes played or sung in the time of two notes (of the same kind). In other words, we must "crowd" three notes into the same amount of time that we usually give to two notes.

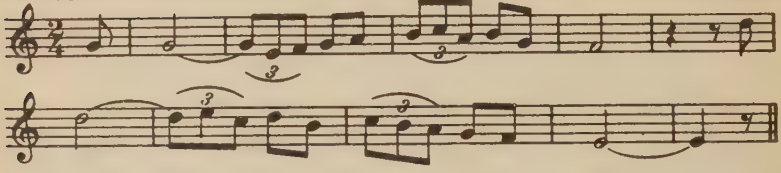
A Triplet is indicated by a curved line (or a bracket) and a figure 3 over or under the group.

In the three following examples, three eighth-notes are played or sung to **one** beat instead of the usual Two.

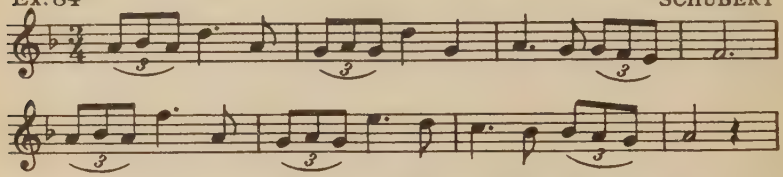
Ex. 82



Ex. 83 YRADIER

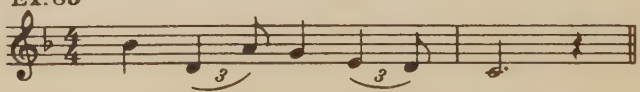


Ex. 84 SCHUBERT



Another form of the Triplet which is frequently used: the quarter and eighth-notes together, have, of course, the same value as a triplet of three eighth-notes:

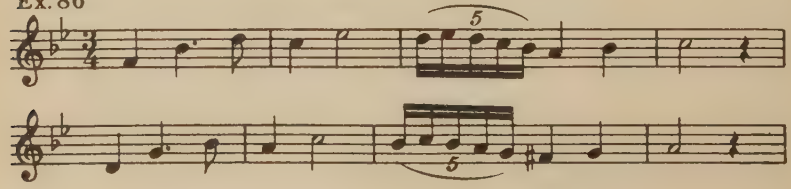
Ex. 85



The Quintolet is a group of five notes played or sung in the time of four notes (of the same kind). The Quintolet is indicated by a curved line and a figure 5 over or under the group.

In the following example, five sixteenth-notes are played in the time ordinarily given to four:

Ex. 86



Questions on Chapter Thirteen

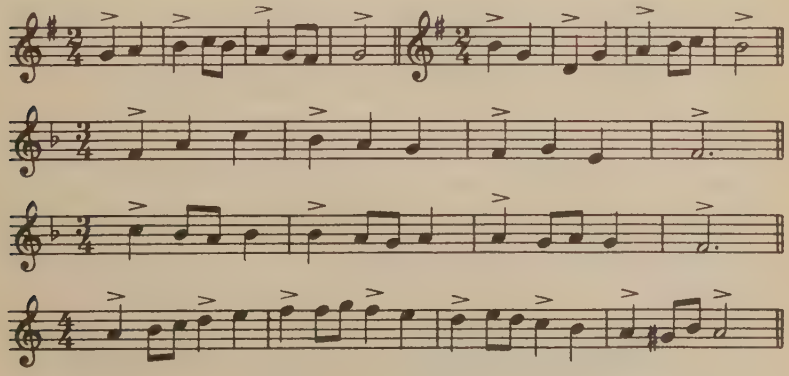
1. How is music measured? How is the measurement indicated?
2. Define meter.
3. What is Duple meter?
4. What is Triple meter?
5. What is Quadruple meter?
6. Explain meters of Five, Six, Nine, Twelve.
7. What is a Duplet?
8. What is a Triplet?
9. What is a Quintolet?

Ear-training for Chapter Thirteen

Teacher plays parts of compositions with strongly marked accent on first beat of the measure. Students discover the meter.

Teacher plays short melodies of his own invention with the same object in view.

Suggestions:



CHAPTER XIV
Rhythm

Rhythm is one of the greatest forces in Nature. The whole Universe is Rhythmic. Think of the Seasons: spring, summer, autumn, winter; and how they return year after year in a never ending cycle. Think of the tides with their rhythmic ebb and flow; think of heat and cold with their rhythmic expansion and contraction; think of our own body — the rhythm of our heart, pulse, breathing.

Just as rhythm is a vital, active part of Nature, so Rhythm in music is the active, vitalizing, propelling force which gives it its infinite charm, variety and power.

Rhythm is the **motion** of music. It is Rhythm which gives to music its "lilt" and "swing."

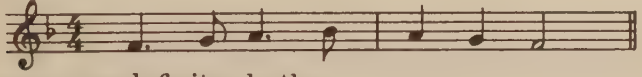
Rhythm includes the **division** of the beats within the measure into notes and rests of different lengths.

A measure contains a certain number of beats or pulses according to the meter employed.
For example: Quadruple meter has four beats in each measure; the rhythm of the music in those measures is determined by the manner in which we allot those four beats to different kinds (values) of notes and rests.

Ex. 87

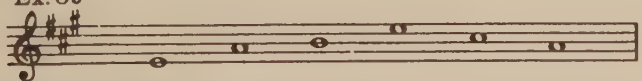
In Example 87, there is no very definite rhythm, as the notes (except the last) are all of uniform value. There must be notes and rests of **different** lengths (duration) in a group of measures in order to have a distinct rhythm. If we change the value of the notes in Example 87 to this:

Ex. 88

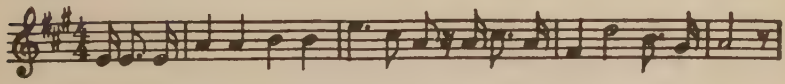


we have a more definite rhythm.

Take the opening measures of the *Marseillaise;* the tone material is very simple:

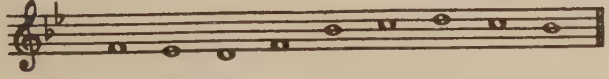
Ex. 89

But in its Rhythmic form it becomes one of the most stirring of songs.

Ex. 90



Or this:

Ex. 91

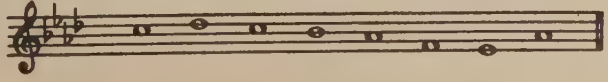


becomes

Ex. 92

And this simple tone progression:

Ex. 93

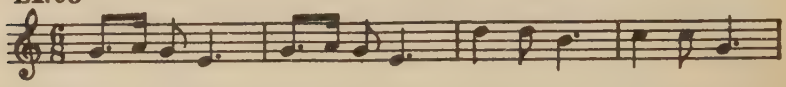


becomes

Ex. 94

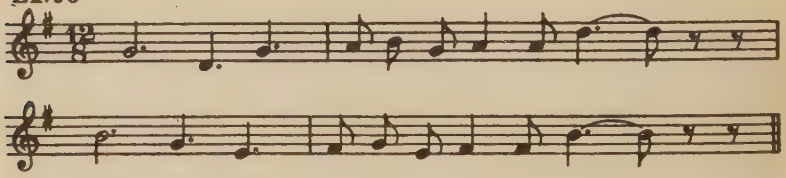
Consider the reposeful, soothing rhythm of *Silent Night*, and

Ex. 95



contrast it with the stirring *Soldiers' Chorus* (from *Faust*).

Ex. 96



From the above examples, it is evident that Rhythm is one of the vital elements in music.

An effective device used by composers is beginning a composition on the "off beat," i. e. with an incomplete measure. Good illustrations of this are seen in Examples 90 and 92.

A measure may begin on any beat or fraction of a beat. This beginning of a composition on the "off beat" seems to give an impetus, or, as we might say, a "Rhythmic flying start."

The "off beat" will be unaccented; the first beat of the first **complete** measure receives the accent.

Beginning on the 4th beat:

Ex. 97

Beginning on 3rd beat:

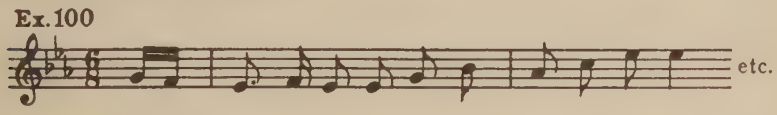
Ex. 98

Beginning on second half of 4th beat:

Ex. 99

Beginning on 6th beat:

Ex. 100



The Lower figure of the Time (or measure) Signature shows the **rhythmic unit of measurement.**

In $\frac{2}{2}$, $\frac{3}{2}$, $\frac{4}{2}$, the half-note (𝅗𝅥) is the Unit of Measurement.

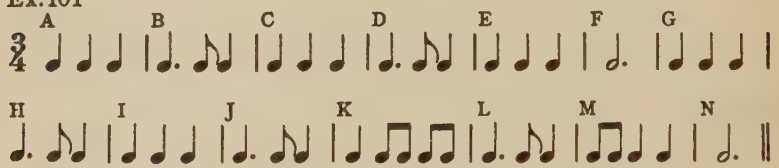
In $\frac{2}{4}$, $\frac{3}{4}$, $\frac{4}{4}$, the quarter-note (♩) is the Unit of Measurement.

In $\frac{3}{8}$, $\frac{4}{8}$, $\frac{6}{8}$, $\frac{9}{8}$, and $\frac{12}{8}$ the eighth-note (♪) is the Unit of Measurement.

To make Rhythm intelligible, a uniform unit must be employed in a composition long enough to *stamp* the pattern and make it coherent.

For example, the rhythm of *America* is:

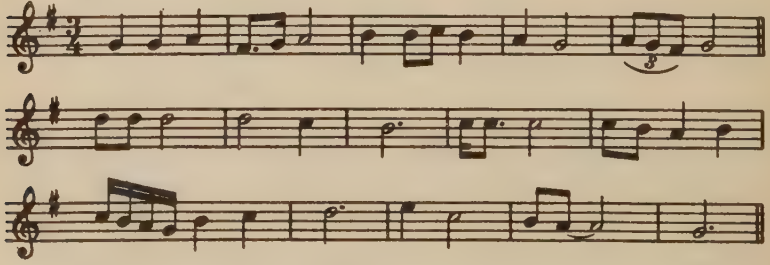
Ex. 101



Compare measures A, C, E, G, and I with measures B, D, H, J, L. At measure F, the rhythm is broken for a Pause (cadence); this marks the first half of the composition. The rhythm is changed slightly at measures K and M, just enough to give variety but not enough to destroy the **rhythmic pattern.**

Listen to the "jumbled" effect in the following, where the rhythm is changed in every measure, though the Meter remains as in the original, and the melody is kept, note for note.

Ex. 102

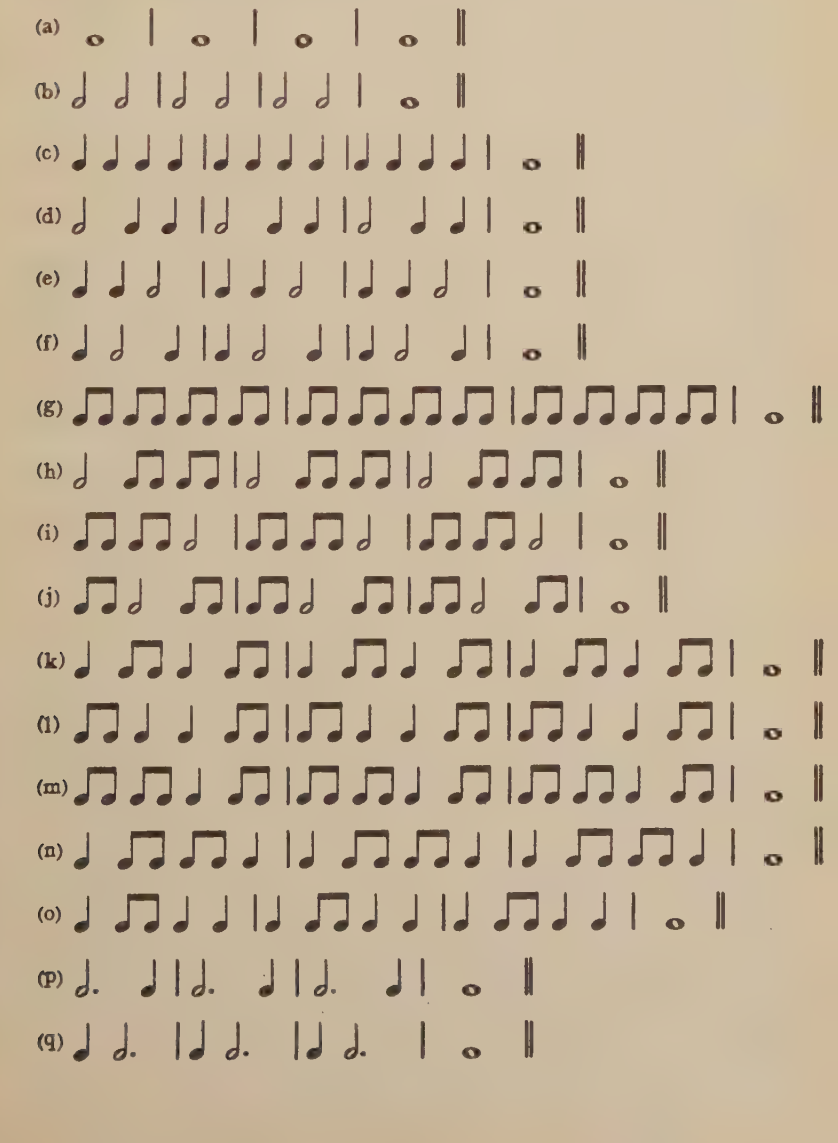


Meters are comparatively few in number. Those most used are meters of 2, 3, 4, 6, 9 and 12.

Rhythms are infinite in number.

A few examples in $\frac{4}{4}$ follow:

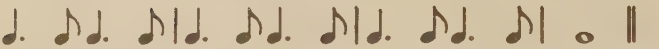
Ex. 103



(r)

(s)

(t)

(u) 

(v)

The above examples could be multiplied almost indefinitely; they suffice, however, to show some of the possibilities in the way of varying the Rhythmic Pattern within a measure.

The **two figures** (the upper denoting the Meter, or **number of beats** in a measure, and the lower showing the **Rhythmic Unit,** or the **kind** of note [or rest] that receives one beat) represent what is called the **Time** (or **Measure**) signature.

Examples of different Meters and Rhythms:

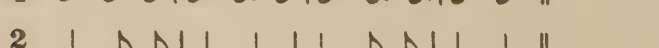
Ex. 104

(a)

(b)

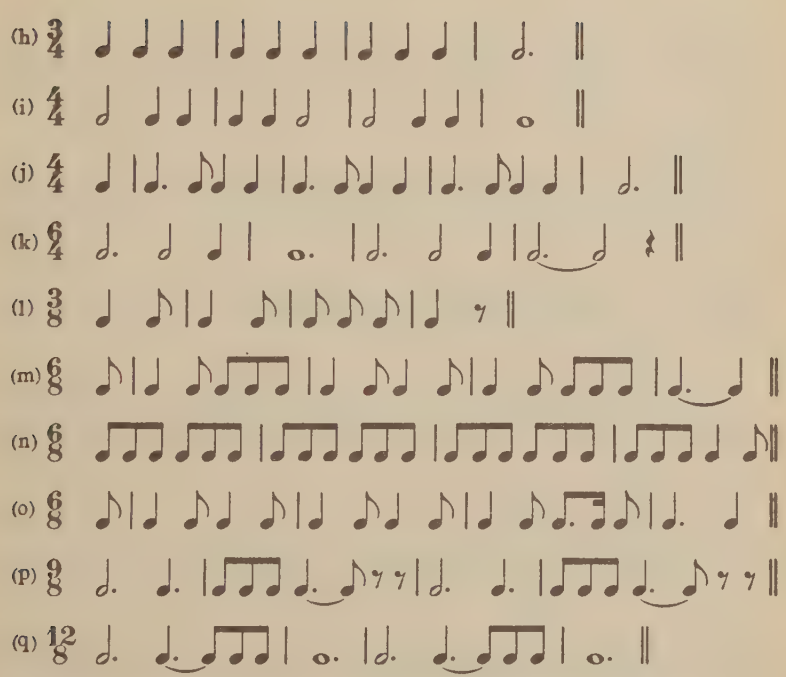
(c)

(d)

(e) 

(f)

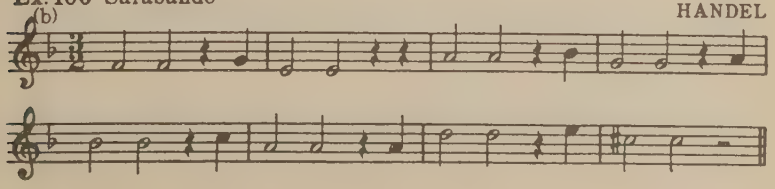
(g)



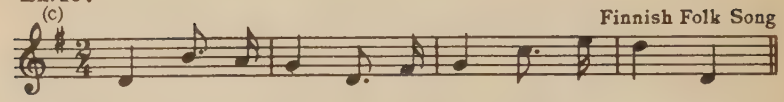
Melodies illustrating Meters and Rhythms in Ex. 104.

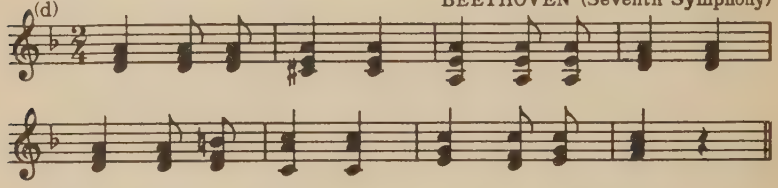
Ex. 105 Duke Street

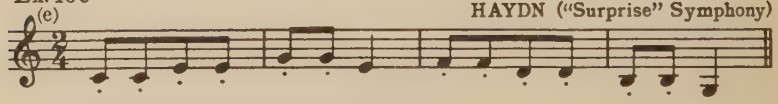
Ex. 106 Sarabande



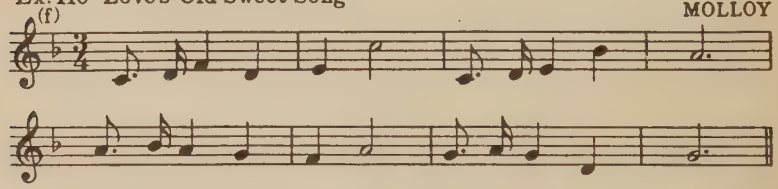
Ex. 107



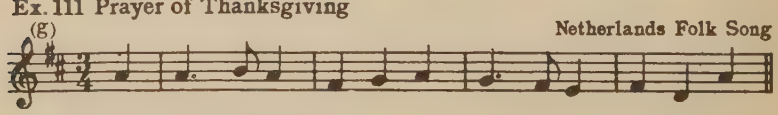
Ex. 108

Ex. 109



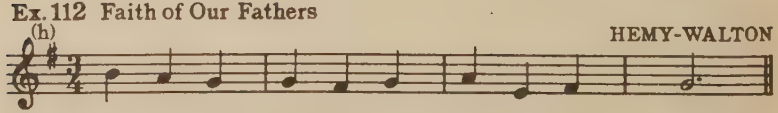
Ex. 110 Love's Old Sweet Song



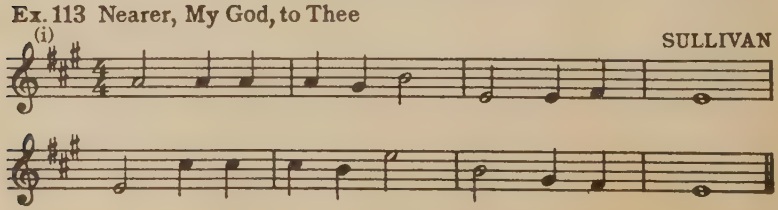
Ex. 111 Prayer of Thanksgiving



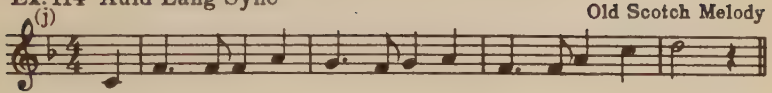
Ex. 112 Faith of Our Fathers



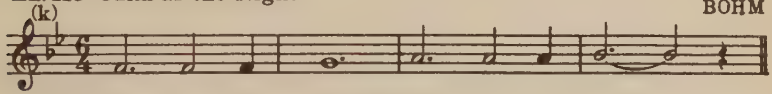
Ex. 113 Nearer, My God, to Thee



Ex. 114 Auld Lang Syne

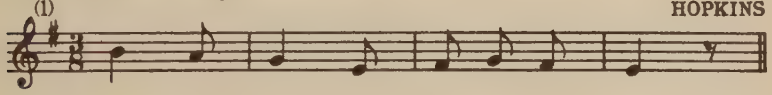
Old Scotch Melody

Ex. 115 Calm as the Night

BOHM



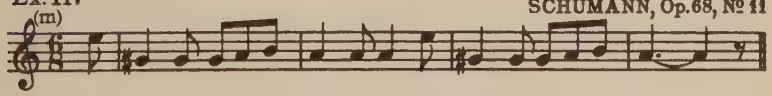
Ex. 116 Three Kings of Orient

HOPKINS



Ex. 117

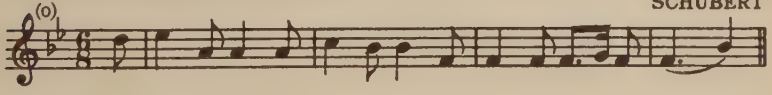
SCHUMANN, Op. 68, № 11

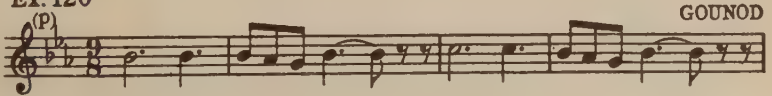


Ex. 118

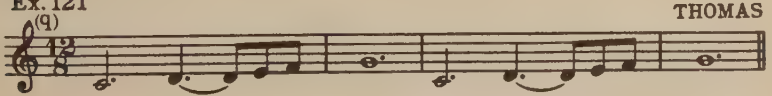
MENDELSSOHN

Ex. 119 Hark! Hark! The Lark

SCHUBERT

Ex. 120

GOUNOD

Ex. 121

THOMAS



Questions on Chapter Fourteen

1. Define Rhythm. How is it determined?
2. Why should the Rhythm of a composition be reasonably uniform?

3. What is meant by Time Signature or Measure Signature?
4. Which part of the Time-Signature indicates the Rhythmic Unit?
5. Of which are greater number employed—Meters or Rhythms?
6. Name the Meters in common use.
7. Analyze the rhythm of *Old Folks at Home, Sweet and Low, Silent Night, America the Beautiful, Dixie.*

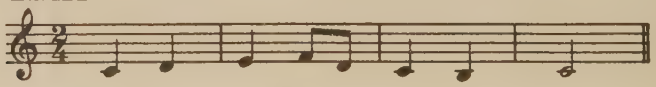
With the music in the hands of the students, a large number of melodies should be studied for their rhythms.

Ear-training for Chapter Fourteen

The following exercises should be used for Dictation. The teacher announces the key, and students sing the scale in that key; the teacher then plays each exercise slowly and with strong accent. Students first find what is the meter; whether there are two, three, four or six beats in a measure. Teacher announces the rhythmic unit and students write the exercise.

Example: Teacher plays slowly

Ex. 122

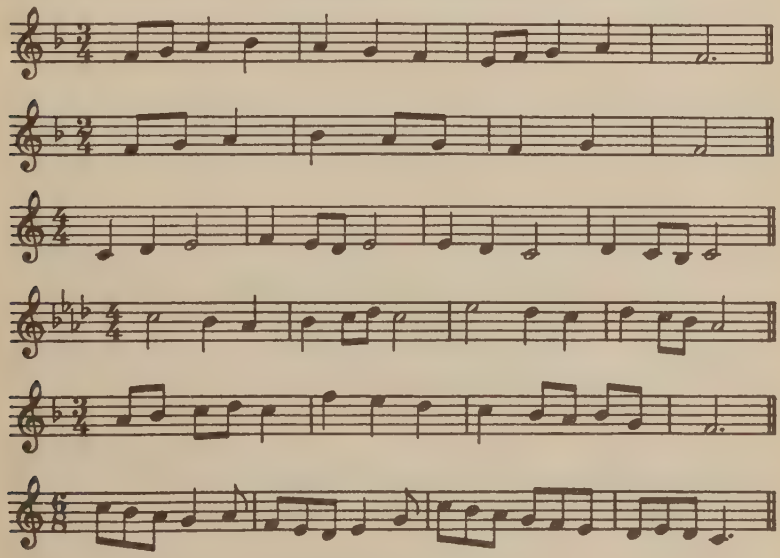


Students answer: "The meter is two." Teacher: "The rhythmic unit is a quarter-note."

Each exercise should be played three times; the first time the students should not attempt to write, but simply listen, trying to grasp the entire phrase, rather than one tone at a

time. The second time the students should write; the third hearing should serve as a "check-up."

The following melodies are suggested as models; the teacher may invent others. No dotted notes are to be used.



Written Work

Illustrate in four measures the following time-signatures, using the same rhythmic unit in each measure.

2/2	2/4	3/2	3/4	4/8	5/8
4/4	6/4	6/8	9/8	12/8	

CHAPTER XV

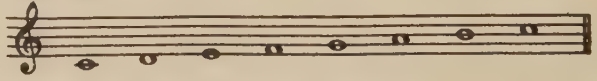
KEYS

A Key is a "Family" of Seven Tones grouped about a Central Tone, and each having a definite relationship with this central tone.

This Central tone is called the **key-tone.**

The difference between a scale and key is this: that while the tones of a scale are arranged in a uniform, systematic progression as follows:

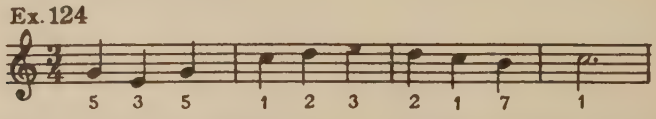
Ex. 123



the tones of a key are arranged according to the composer's fancy and not according to any set rule.

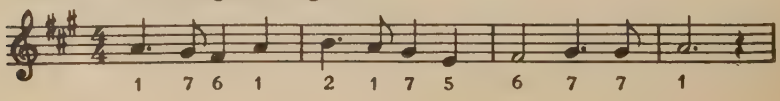
Let us say that a Key comprises the tones of a Scale which starts at a certain pitch.

Ex. 124



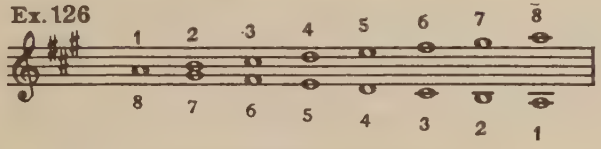
The Key-tone in the above is C. The melody is in the key of C Major as there are no sharps or flats in the signature and it ends on C (Do); at the same time no other tones except those which belong to the Major scale (C) are used, though the latter are used in an irregular order.

Ex. 125 All Through the Night



In the above example the tones of the Major scale from A are used. The key is A; the Key-tone (or Do) is A.

Ex. 126

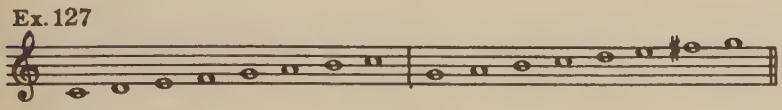


Relationship of Keys

Keys are Related according to the number of tones which they have in common.

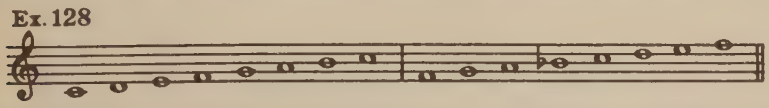
For example:

Ex. 127



From Example 127 it is seen that the Keys of C and G are closely related, the F♯ being the only tone not common to both.

Ex. 128



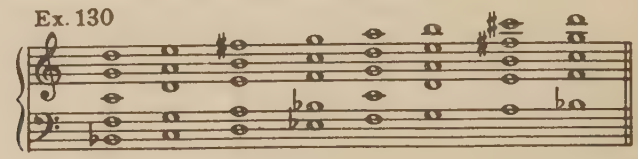
From Example 128 it is evident that the same close relationship exists between C and F, the B♭ being the only tone not common to both.

Ex. 129 Diagram of Nearest Related Keys

Fifth below	Given Key	Fifth above
One Flat		**One Sharp**
F	C	G
d	a	e
Relative Minor	Relative Minor	Relative Minor

From the diagram, we see that the five nearest related keys to C Major are: the relative minor of C (a), and the Major keys of 1♯ (G) and 1♭ (F) together with **their** relative minors (e and d). This relationship is in **Fifths**—Counting **five letters** or **Staff degrees** (Lines and Spaces) upward or downward along a scale, and starting from the keynote as the first of the five letters, shows the next-related key.

Ex. 130



It is apparent from Example 130 that as we continue our Fifths upward or downward, we get farther and farther away from the key of C in relationship, until, finally, we reach the key of C♯ (7♯) and C♭ (7♭) which have no tones in common with the key of C.

A Chart of Major Keys and their Relative Minor Keys

(The minor keys are indicated by small letters)

Read from left to right:

Ex. 131

1♯	2♯	3♯	4♯	5♯	6♯	7♯
C-a	G-e	D-b	A-f♯	E-c♯	B-g♯	F♯-d♯	C♯-a♯
	f♯	f♯c♯	f♯c♯g♯	f♯c♯g♯d♯	f♯c♯g♯	f♯c♯g♯	f♯c♯g♯d♯
					d♯a♯	d♯a♯e♯	a♯e♯b♯

The sharp keys are five letters or degrees apart, and the sharps are five letters apart.

Ex. 132 Read from right to left.

7♭	6♭	5♭	4♭	3♭	2♭	1♭
a♭-C♭	e♭-G♭	b♭-D♭	f-A♭	c-E♭ . .	g-B♭ . . .	d-F.
b♭e♭a♭d♭	b♭e♭a♭d♭	b♭e♭a♭d♭g♭	b♭e♭a♭d♭	b♭e♭a♭	b♭e♭	b♭
g♭c♭f♭	g♭c♭					

The flat keys are five letters or degrees apart, and the flats are five letters apart (counting downward).

Theoretically, it is possible to continue the cycle of fifths until we reach the key of B♯ which would require 12♯, and D♭♭, having 12♭.

These extreme keys, however, would necessitate the use of double-sharps and double-flats and make reading difficult, for which reason, beyond seven sharps and seven flats, **enharmonic** keys are used.

Enharmonic means **written** differently as to notation, but **sounding** the same on a keyed instrument (such as the piano or organ).

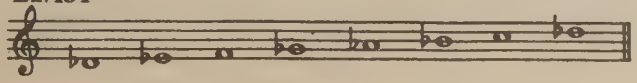
The **six** practical Enharmonic keys are:

C♯ (7♯) sounds the same as D♭ (5♭).
F♯ (6♯) sounds the same as G♭ (6♭).
B (5♯) sounds the same as C♭ (7♭).

Ex. 133

sounds the same as

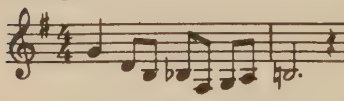
Ex. 134

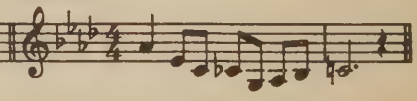


There is a theory among some composers that certain of the keys are brilliant, others somber, etc. Colors also are associated with the various keys, and in writing a piece of music, a key is chosen according to the mood or subject the composer wishes to express.

Whether this theory may or may not be true, the **practical** reason for the use of many keys is that when a composer writes a composition for a certain voice or instrument, he must choose a key in which the range for the music will be within the range or compass of that voice or instrument.

For example: the lowest note which may be written for the violin is G (third space below the treble staff) so that if the composer wished to express the following passage for the violin:

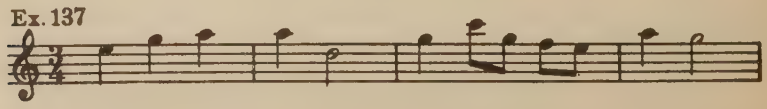
Ex. 135

Ex. 136



he could not write it in the key of G, as there is no F♯ below middle C on the violin. A♭ would be the lowest key in which the violin could play this particular passage.

For the same reason the following would not be written for a Contralto voice, as it would not be within the Contralto range:

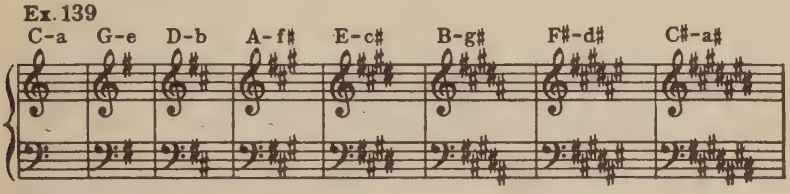
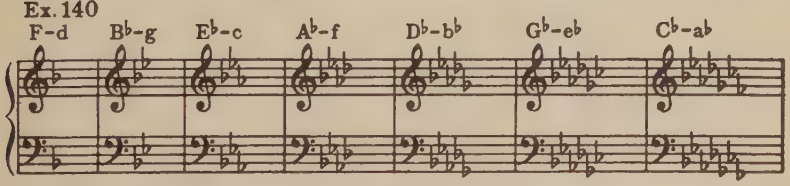
Ex. 137



But in the key of B♭, it could easily be sung:

Ex. 138

Below are the **signatures** of the **fifteen Major keys** and their **Relative Minor Keys.**

Ex. 139

Ex. 140

Questions on Chapter Fifteen

1. Define a Key.
2. What is the difference between a Key and a Scale?
3. What determines the Relationship of keys?
4. What does Enharmonic mean?
5. Name the six enharmonic keys.
6. Name the five keys nearest related to G. Make a diagram.
7. Name the five keys nearest related to F. Make a diagram.

Ear-training for Chapter Fifteen

Teacher plays short compositions in Major and Minor keys. When the music changes from major to minor or vice versa, the students so state.

Written Work

Write the key-signatures of the following keys:

G minor, D major, D minor, E♭ major, C♯ minor, B minor, B major, A major, E major, E minor, A♭ major, G♯ minor.

Diagram the nearest related keys to the following Majors: G, D, A, E, B, F♯, C♯, F, B♭, E♭, A♭, D♭, G♭, C♭.

There should be a thorough oral drill on all of the major and minor key-signatures until complete mastery is obtained.

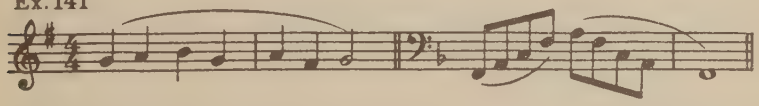
CHAPTER XVI

THE SLUR AND THE TIE—LEGATO, NON-LEGATO AND STACCATO

A **Slur** is a **curved line** placed **over** or **under** two or more notes to indicate that those notes are to be played or sung **legato.**

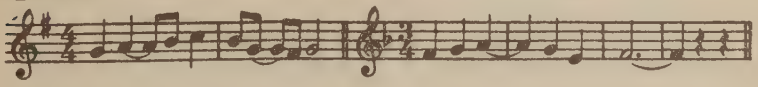
Legato means **connected**—bound together in a smooth, close manner, causing one tone to merge into the next as nearly as possible. In the absence of a Slur, unless there are definite signs to the contrary, Legato is implied.

Ex. 141



A **Tie** is a **curved line between two notes** of the **same pitch** (i. e. on the same line or in the same space, though occasionally two enharmonic notes are tied together). The second note is not sounded separately, but is **held over** from the first note, the first note being sounded (held) for the time duration of **both.**

Ex. 142



Enharmonic notes tied:

Ex. 143

Non-Legato is a combination of Legato and Staccato—neither long nor short, simply **each tone** is **separated slightly.**

Ex. 144

Staccato means **not connected**—separated—detached—rather short and crisp. Staccato is indicated by a dot over or under a note.

Ex. 145

Questions on Chapter Sixteen

1. What is a Slur in music?
2. For what is it used?
3. Define Legato.
4. What is a Tie in music? What does it do?
5. What are enharmonic notes?
6. Define Non-Legato. How is it indicated?
7. What does Staccato mean? How is it indicated?

Ear-training for Chapter Sixteen

The teacher plays melodies Legato, Non-Legato, and Staccato, changing frequently from one style to the other. Students decide which style is being used.

CHAPTER XVII

THE DOT IN MUSIC

We learned of two uses of the **Dot** in Chapter Sixteen (i.e. to indicate Staccato, and, in conjunction with the Slur, Non-Legato).

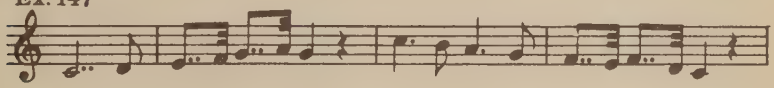
Other uses of the Dot

A Dot is used beside a note (on the right, **after the note**) to increase its duration (value) **one-half**; in other words, a Dot beside a note adds one-half of the note's value *to* the note.

Ex. 146

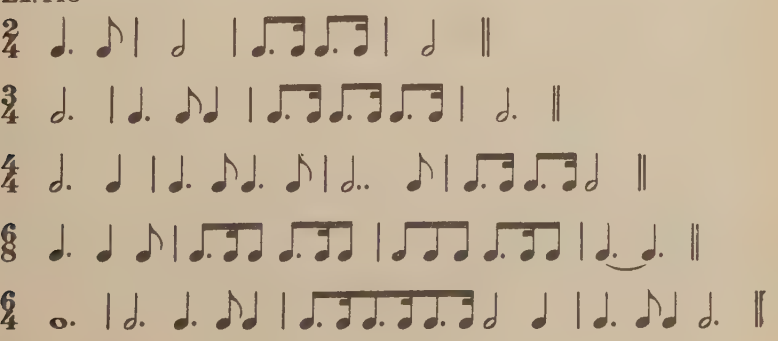
A second Dot beside a note adds half the value of the first Dot (i. e. Two Dots after a note increase its value [duration] Three-fourths).

Ex. 147

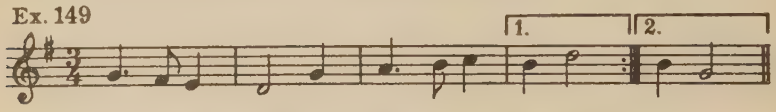


Analyze the value of the **Dots** in the following exercises:

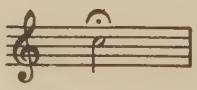
Ex. 148



Dots are used as a kind of shorthand sign when part of the music is to be repeated. The Dots are used in conjunction with a double-bar and are placed either in the second and third spaces or in each of the four spaces.

Ex. 149

Example 149 illustrates 1st and 2nd **endings.** Play or sing through the first four measures, go back to the beginning and **repeat** the first **three** measures; omit the fourth, and finish with the fifth. The Dots, when used in this manner are called **Repeat Marks.**

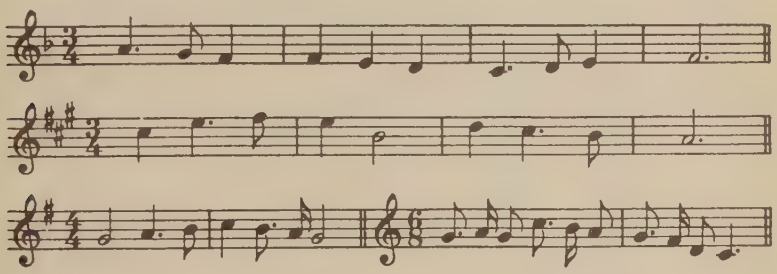
Finally, Dots are used in conjunction with a small curved line, to make a sign which, when placed over or under a note, indicates that the sound of the note is to be **prolonged** beyond the time duration indicated by the meter signature; how **much** longer being determined by the nature of the music, rate of speed, etc.

This sign is called a Fermata, Pause, or Hold.

Questions on Chapter Seventeen

1. How much does a Dot increase the duration of the note before it?
2. How much does a second Dot increase the duration of the note with which it is used?
3. Name and explain four other uses of the Dot.

EAR-TRAINING FOR CHAPTER SEVENTEEN

The following exercises are for dictation. The teacher should play slowly and evenly, with strong accent. The teacher may invent similar melodies.



Much music should be examined by the students for the uses made of the Dot.

CHAPTER XVIII

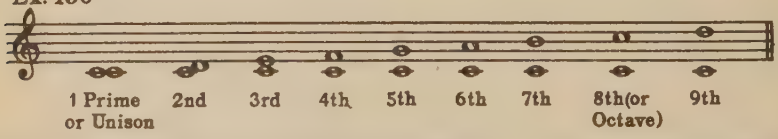
INTERVALS

An **Interval** in music is the Distance from one note to another on the staff, or the Difference in pitch between two tones when sounded. To master Intervals a thorough knowledge of the **Major Scale** and all **major keys** is **absolutely essential.** In the study of Intervals, the **Major Scale** is the **basis of measurement.** Intervals are measured **upward** from the **lower** tone to the **higher.** Intervals are usually reckoned from **one** to **nine.**

Intervals have **number** names and **specific** names. For example: an interval may be a 4th, and it may be a certain **kind** of 4th.

Below are nine intervals from C to other notes in the scale from C.

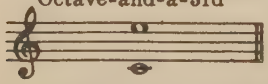
Ex. 150



Beyond the 9th, intervals are generally spoken of as Octave-and-a-third (10th), Octave-and-a-4th (11th), etc.

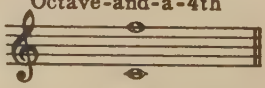
Ex. 151

Octave-and-a-3rd



Ex. 152

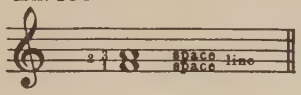
Octave-and-a-4th



The line or space occupied by the lower note and the line or space occupied by the upper note are **both included** when reckoning the number name.

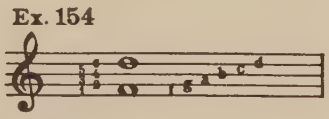
The following interval is a 3rd because **three letter names** or **three staff degrees** (lines and spaces) are involved:

Ex. 153



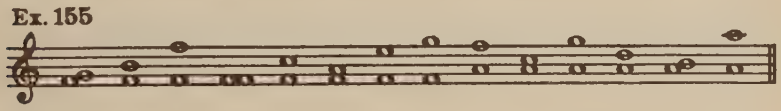
The interval in Example 154 is a 6th for like reasons:

Ex. 154



Give the **number names** of the following intervals:

Ex. 155

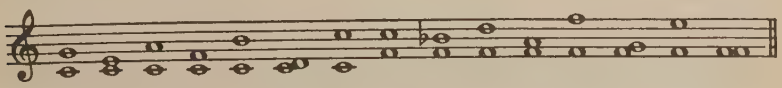


Questions on Chapter Eighteen

1. What is an Interval in music?
2. What knowledge is essential before you can master intervals?
3. What is the Basis of Measurement for intervals?
4. How are intervals measured?
5. What two kinds of names has each interval?

Ear-training for Chapter Eighteen

Teacher plays the following intervals; students answer by number names.



The students should **think** the intervals silently; there should be no humming along the scale between the two tones.

CHAPTER XIX

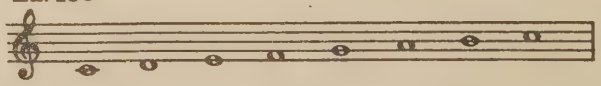
Major and Perfect Intervals

There are **five** kinds of Intervals:

1. **Major.**
2. **Perfect.**
3. **Minor.**
4. **Diminished.**
5. **Augmented.**

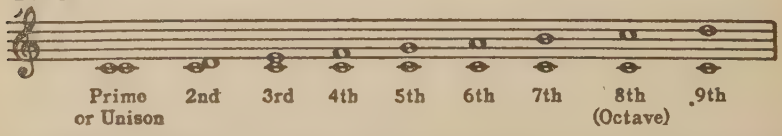
An interval is Major if the Upper tone is found in (belongs **to**) the **Key** (scale) of the Lower tone, **and** if its number name is 2nd, 3rd, 6th, or 7th. An interval is Perfect if the upper tone belongs to the scale of the lower note, **and** if its number name is Prime, 4th, 5th, or 8th.

Ex. 156



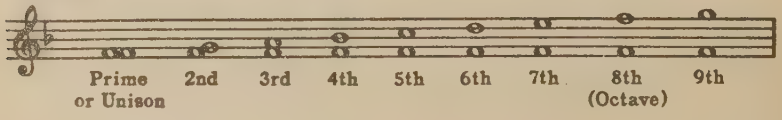
Example 156 represents the tones which belong in the key of C. Forming the intervals from C, we get the following:

Ex. 157



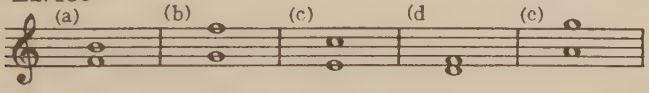
The upper tones: C, D, E, F, G, A, B, all belong in the key of C; therefore they are all Major, or else Perfect.

Ex. 158



F, G, A, B♭, C, D, E, all belong in the key of F, therefore, all intervals in Example 158 are Major intervals, or else Perfect.

Ex. 159



In measure one (a), the key we must measure in is F (since F is the Lower note), and the Lower note is always considered Do, or 1; therefore we must think of the key-signature of F which is one flat (B♭). There is no B natural in the key of F, therefore the interval cannot be Perfect.

In measure (b) we think and measure in the key of G, since G is the lower note. The key of G has an f♯ in it, therefore the interval cannot be Major.

In (c) we measure in the key of E (four sharps, f♯, c♯, g♯, d♯). The upper note is C natural, therefore the interval cannot be Major.

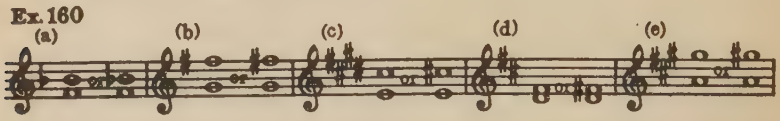
In (d) we measure in the key of D (two sharps, f♯ and c♯). F natural does not belong in the key, therefore the interval cannot be Major.

In (e) the lower note is A, and we measure in that key; since there are three sharps in the key of A (f♯, c♯, g♯) and g♯ is one of them, the interval cannot be Major.

We can **make** four of the intervals in example 159 Major, and one Perfect, by writing the key-signature of the keys of the

lower notes; or by putting the proper chromatic sign before each upper note, as follows:

Ex. 160

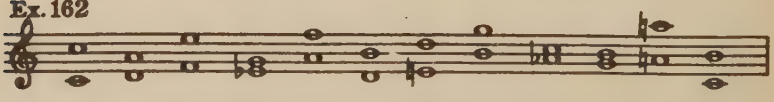


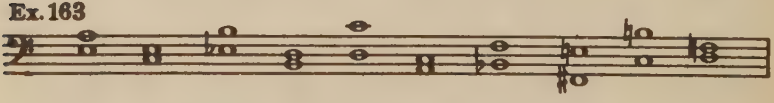
Compare carefully the intervals in Example 159 with Example 160 and you will readily see why in the former the intervals are **not** Major, nor Perfect, while, in the latter, four of them are Major and one is Perfect.

Analyze the following intervals, marking the **number** name of each, and under those that are Major write Mj.; those that are Perfect, mark Pf. Chromatic signs **do not** affect the **number** name of the interval. For example, **all** of the intervals in Example 161 are 5ths.

Ex. 161

Ex. 162

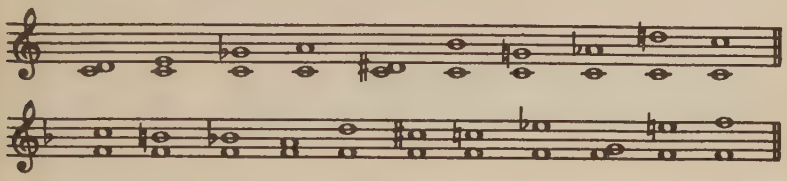


Ex. 163

Questions on Chapter Nineteen

1. What is a Major interval?
2. In determining whether or not an interval is Major, what must we think of?
3. Do chromatic signs affect the Number name of an interval?

Ear-training for Chapter Nineteen

The teacher plays the following intervals; students answer "major" when they hear major intervals, remaining silent when the interval is not major.

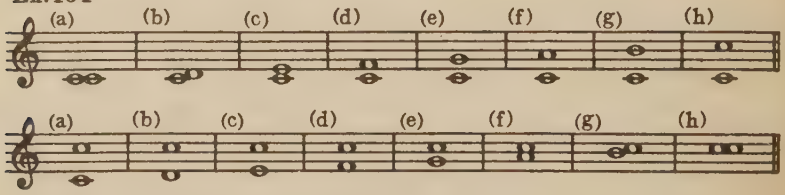


CHAPTER XX

PERFECT INTERVALS, *Continued*

Another definition of Perfect intervals is to say that **an** interval is **perfect** if the Upper tone is found in the key of the Lower tone, **and** the Lower tone is found in the key of the Upper tone. In other words, if **both** tones are found in **both** keys, the interval is **perfect.**

Ex. 164



In measure (a), either C is found in the other's key.

In measure (b), the upper tone D is found in the key of the lower tone C, but the lower tone C is **not** found in the key of the upper tone D (2♯).

In measure (c), the upper tone E is found in the key of the lower tone C, but the lower tone C is **not** found in the key of the upper tone E (4♯).

In measure (d), the upper tone F is found in the key of the lower tone C, **and** the lower tone C **is** found in the key of the upper tone F.

In measure (e), the upper tone G is found in the key of the lower tone C, **and** the lower tone C **is** found in the key of the upper tone G (1♯).

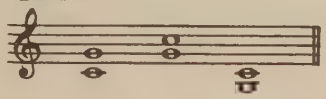
In measure (f), the upper tone A is found in the key of the lower tone C, but the lower tone C is **not** found in the key of the upper tone A (3♯).

In measure (g), the upper tone B is found in the key of the lower tone C, but the lower tone C is **not** found in the key of the upper tone B (5♯).

In measure (h), the upper tone C is found in the key of the lower tone C, and vice versa.

To **prove** whether or not an interval is Perfect, invert the interval, either by placing the lower tone an octave higher, or the upper tone an octave lower. Perfect intervals, when inverted, remain perfect.

Ex. 165

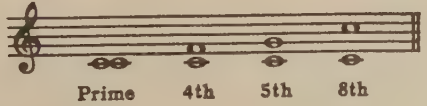


In both cases the interval remains **perfect.**

Making a summary of our analysis, we find that the Prime (as unison), 4th, 5th and 8th (octave) are **perfect,** as tested by the rule at the beginning of this chapter, and that the 2nd, 3rd, 6th, 7th and 9th are **Major,** when taken from Do and along the major scale.

What is true of the key of C is true of **every major key.**

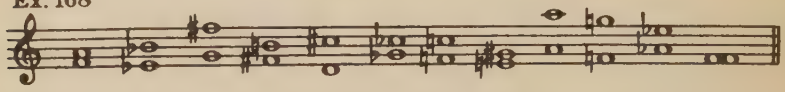
Perfect intervals:

Ex. 166

Major intervals:

Ex. 167

Analyze the following intervals. Those that are Major, mark Mj., those that are Perfect, mark Pf.

Ex. 168



Questions on Chapter Twenty

1. When is an interval Perfect?
2. How can we prove intervals to find whether or not they are perfect?
3. What are the number names of the Perfect intervals?
4. Are the same intervals Perfect in every Major key?

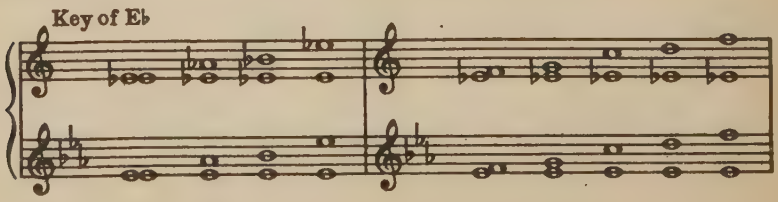
Ear-training for Chapter Twenty

The teacher plays the following intervals. The students answer "major" and "perfect" when they hear those intervals. Students must be taught to **think** scale tones **silently.**

Written Work

Write the Major and the Perfect intervals in the following keys, first **without** signatures, then **with** signatures: G, D, A, E, B, F♯, C♯, C♭, G♭, D♭, A♭, E♭, B♭, F.

Model:

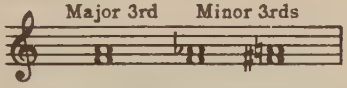


CHAPTER XXI

Minor Intervals

A Minor interval is a **half-step smaller** than a Major interval. A Major interval may be made Minor, **either** by lowering the upper tone or by raising the lower tone.

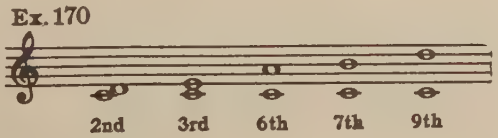
Ex. 169



Since the number names of Major intervals are 2nd, 3rd, 6th, 7th and 9th, the Minor intervals will bear the same numbers.

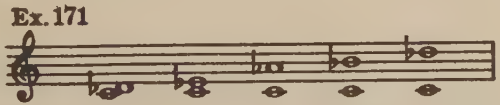
Major intervals from C:

Ex. 170

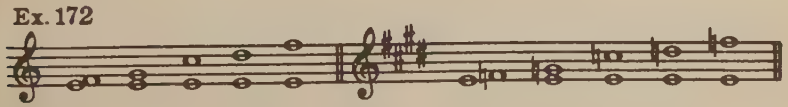


Minor intervals from C:

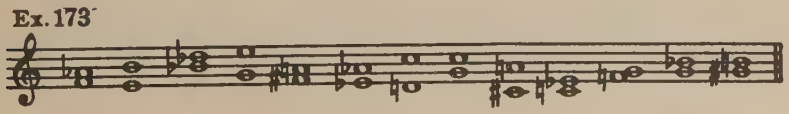
Ex. 171



Minor intervals from E, **without** signature and **with** signature:

Ex. 172

Analyze the following intervals, marking the Major (Mj.), Perfect (Pf.) and Minor (Mi.) intervals:

Ex. 173



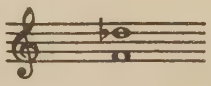
Questions on Chapter Twenty-one

1. What is a Minor interval?
2. How can we convert a Major interval into a Minor interval?
3. Which of the intervals can be made Minor?

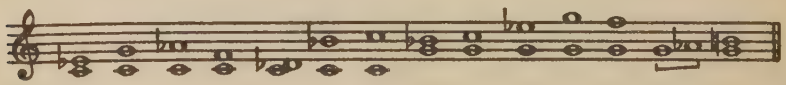
Ear-training for Chapter Twenty-one

Teacher plays the following intervals. Students to recognize the Minor intervals. Students should Think the Number name first, then Think what the pitch of the Major interval of that number would be, finally deciding whether the interval heard is a half-step smaller than the Major.

Example. Teacher plays:



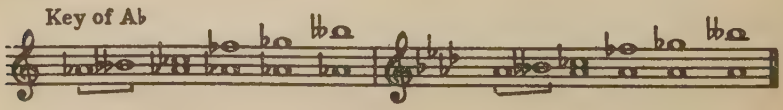
The student decides the number name is a 6th; then he thinks how the Major 6th (La) would sound as to pitch; finally he thinks *down* a half-step and decides the intervals is a Minor 6th.



Written Work

Write the Minor intervals, from the keynote, in the following keys, first without signatures, then with signatures: C, G, D, A, E, B, F♯, C♯, F, B♭, E♭, A♭, D♭, G♭, C♭.

Model:

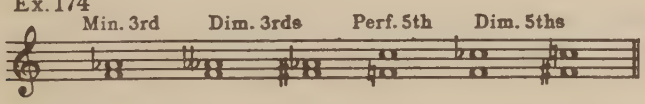


CHAPTER XXII

Diminished Intervals

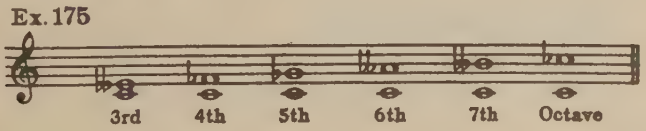
A **Diminished** interval is a **half-step smaller** than a Minor or a Perfect interval.

A Minor or a Perfect interval may be made Diminished **either** by lowering the upper tone, or by raising the lower tone.

Ex. 174

Since all intervals, from Prime through 9th, along the Major scale, if they are taken from Do, are Major or else Perfect, It would be theoretically possible to make them all Diminished. From a practical standpoint, however, we begin with the Diminished 3rd, as a Diminished Unison would be unthinkable, and a Diminished 2nd would be written as a Unison.

Diminished intervals from C:

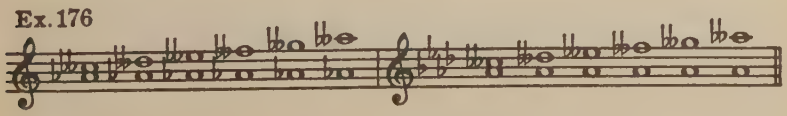
Ex. 175



Diminished intervals from A♭:

Without key-signature. With key-signature.

Ex. 176



Analyze the following intervals, marking the Diminished intervals (Dim.):

Ex. 177

Questions on Chapter Twenty-two

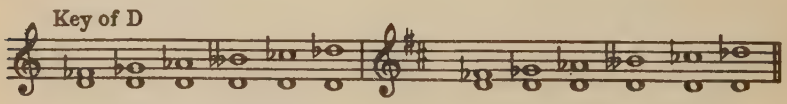
1. What is a Diminished interval?
2. How may a Minor or a Perfect interval be converted into a Diminished interval?
3. How many of the intervals may become Diminished?

Ear-training for Chapter Twenty-two

Continue to drill on Major, Perfect, and Minor intervals.

Written Work

Write the Diminished intervals from the keynote in the following keys, first without key-signatures, then with key-signatures. C, G, D, A, E, B, F♯, C♯, F, B♭, E♭, A♭, D♭, G♭, C♭.

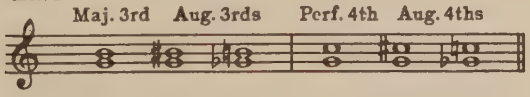
Model:

CHAPTER XXIII

AUGMENTED INTERVALS

An **Augmented** interval is a **half-step larger** than a Major or a Perfect interval.

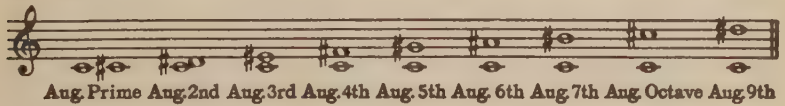
A Major or Perfect interval may be made Augmented, **either** by raising the upper tone, or by lowering the lower tone.

Ex. 178

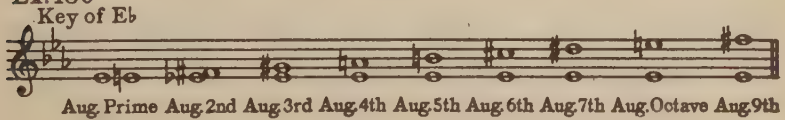


All Major and Perfect intervals may become Augmented.

Ex. 179

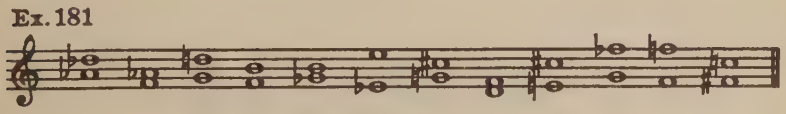


Ex. 180



Analyze the following intervals and mark them, Major (Mj), Minor (Mi.), Perfect (Pf.), Diminished (Dim.), Augmented (Aug.):

Ex. 181



Questions on Chapter Twenty-three

1. What is an Augmented interval?
2. How may we convert Major and Perfect intervals into Augmented intervals?
3. How many of the intervals may become Augmented?

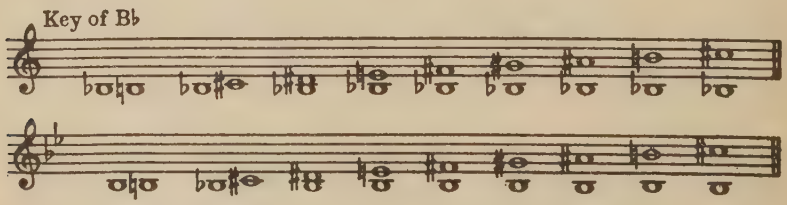
Ear-training for Chapter Twenty-three

Continue as in Chapter Twenty-two. The ready recognition of the various intervals by ear is of the utmost importance.

Written Work

Write the Augmented intervals in the following keys, first without key-signatures, then with key-signatures: C, G, D, A, E, B, F♯, C♯, F, B♭, E♭, A♭, D♭, G♭, C♭.

Model:

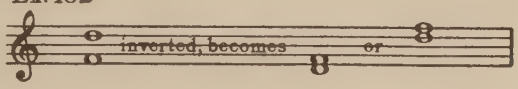


CHAPTER XXIV

Inversion of Intervals

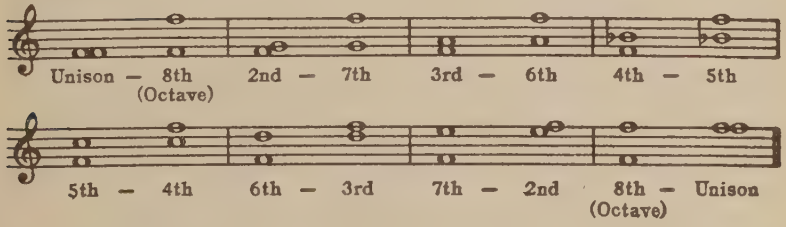
An interval becomes **inverted,** either by placing the upper tone an octave Lower, or by placing the lower tone an octave Higher.

Ex. 182



Upon inversion, a unison becomes an octave;
a 2nd becomes a 7th;
a 3rd becomes a 6th;
a 4th becomes a 5th;
a 5th becomes a 4th;
a 6th becomes a 3rd;
a 7th becomes a 2nd;
an octave becomes a unison.

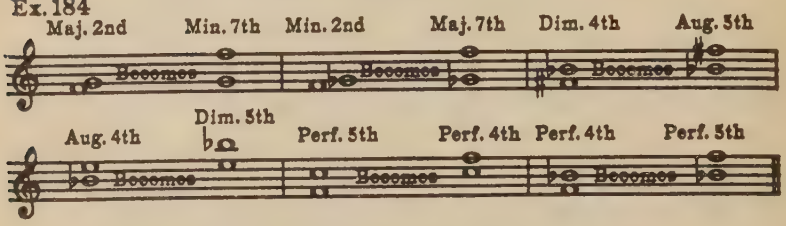
Ex. 183



Upon inversion,
Major intervals become Minor.
Minor intervals become Major.
Diminished intervals become Augmented.

Augmented intervals become Diminished.
Perfect intervals **remain** Perfect.

Ex. 184



Questions on Chapter Twenty-four

1. What is meant by the Inversion of an interval?
2. An inverted unison becomes what?
3. An inverted 2nd becomes what?
4. An inverted 3rd becomes what?
5. An inverted 4th becomes what?
6. An inverted 5th becomes what?
7. An inverted 6th becomes what?
8. An inverted 7th becomes what?
9. An inverted octave becomes what?
10. Major intervals, when inverted, become what?
11. Minor intervals, when inverted, become what?
12. Diminished intervals, when inverted, become what?
13. Augmented intervals, when inverted, become what?
14. Perfect intervals, when inverted, **remain** what?

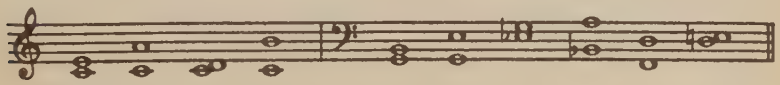
Ear-training for Chapter Twenty-four

There should be a thorough drill in the recognition of intervals both through the eye and through the ear, beginning with the Major and Perfect, then going on to the more difficult Minor, Diminished, and Augmented. At first, the in-

tervals should all be played from one note; later, as skill develops, the student should be able to name any interval sounded by the teacher, regardless of the lower tone used (i. e., the lower note should be changed with each interval).

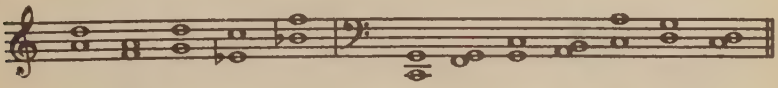
Written Work

By Prefixing the proper chromatic sign, make the following intervals Minor:



Make the following intervals Diminished:

Make the following intervals Augmented:



Another way in which Intervals may be measured, is by Steps and Half-Steps.

A unison has no measurable distance.
An Augmented unison contains a half-step.
A Minor 2nd contains a half-step.
A Major 2nd contains a whole step.
An Augmented 2nd contains a step and a half.
A Minor 3rd contains a step and a half.
A Major 3rd contains two whole steps.
An Augmented 3rd contains two steps and a half.

A Perfect 4th contains two steps and a half.
A Diminished 4th contains two steps.
An Augmented 4th contains three steps.
A Perfect 5th contains three steps and a half.
A Diminished 5th contains three steps.
An Augmented 5th contains four steps.
A Minor 6th contains four steps.
A Major 6th contains four steps and a half.
An Augmented 6th contains five steps.
A Minor 7th contains five steps.
A Major 7th contains five and a half steps.
A Diminished 7th contains four and a half steps.
A Diminished octave contains five and a half steps.
A Perfect octave contains six steps.

CHAPTER XXV

TRANSPOSITION

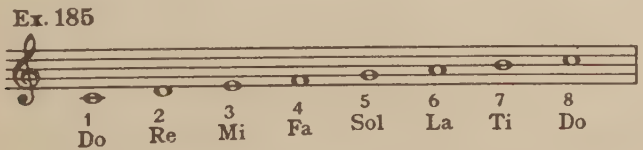
To transpose a piece of music is to rewrite or play it in a different key from that in which it was originally written.

In this book, **Transposition** will deal only with melodies on the basis of Number and Syllable names, and will embrace transposing from and to, different keys, using the Treble clef, also transposing from the treble to the bass clef and vice versa.

When you wrote the major scale from different pitches in Chapter Ten, you were simply transposing the scale into various keys. We shall do exactly the same thing with our melodies.

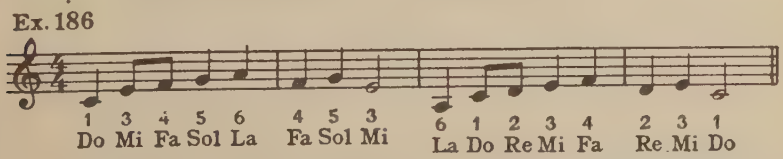
The scale from C:

Ex. 185



A simple melody using some of the above notes:

Ex. 186

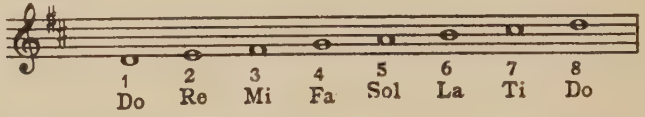


The order in which we used the scale tones in Example 186 was: 1, 3, 4, 5, 6, 4, 5, 3, 6, 1, 2, 3, 4, 2, 3, 1.

Let us transpose our melody **one step higher,** which will bring it into the key of D.

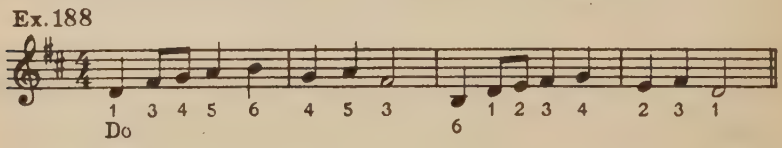
The scale from D:

Ex. 187



Now, in our new key, 1 or Do will, of course, be D.

Ex. 188

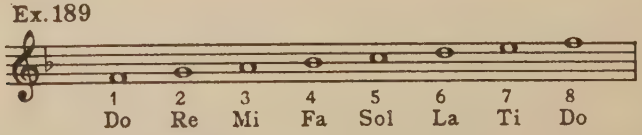


We used the tones of the scale in exactly the **same order** as in Example 186, and the melody will sound the same, except of course, the whole thing is pitched one step higher.

The same melody transposed once more; this time to the key of F.

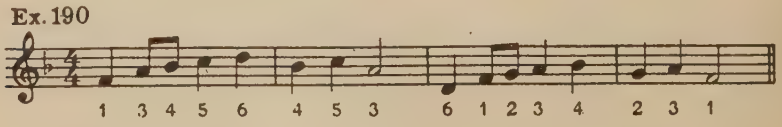
The scale from F:

Ex. 189



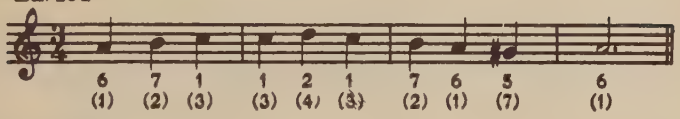
In this key, 1 or Do will be F.

Ex. 190



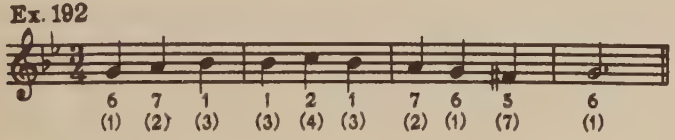
A Minor melody (a minor):

Ex. 191



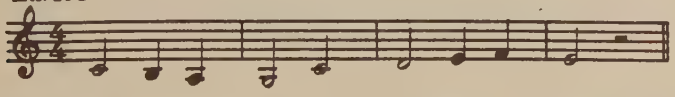
Transposed down one step to G minor:

Ex. 192

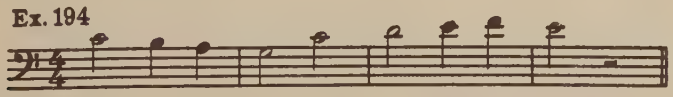


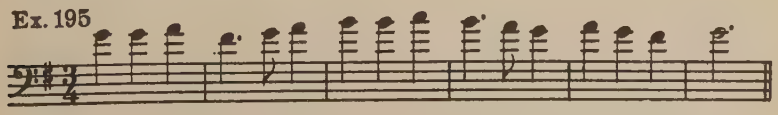
Transposition from the Treble to the Bass clef (or staff) is a simple matter. For the present, however, we will not transpose from one **key** to another, but merely **transfer** our melody from one staff to another, retaining the same key.

Ex. 193



Example 193 transferred from the treble to the bass, keeping the **same pitches:**

Ex. 194

America, in the key in which it is generally sung (G), written to sound the same pitches in the bass staff, would appear as follows, necessitating the use of many leger lines, thus increasing the difficulty of the reading:

Ex. 195

Questions on Chapter Twenty-five

1. What is meant by Transposition?
2. On what basis may a melody be transposed?

Ear-training for Chapter Twenty-five

The teacher should transpose familiar melodies to various keys until students have grasped the fact clearly that transposing a melody does not change its "tune", but simply pitches it higher or lower as the case may be.

Written Work

Transpose the following group of notes to these keys:
D, E, F, A♭, B♭, B, F♯, D♭, C♯, G♭, C♭, G.

Ex. 196

Transpose the following melody to the key of A♭:

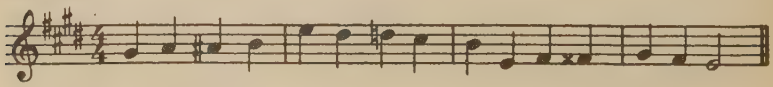
Ex. 197

Transpose the following melody to the key of five sharps:

Ex. 198

Transpose the following melody to the key of three flats:

Ex. 199

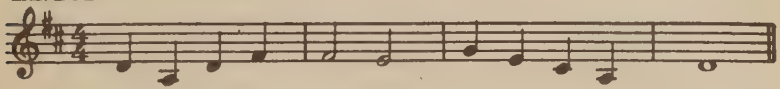


Transpose the following melody **two octaves lower,** using the Bass clef:

Ex. 200

Write the following in the Bass clef, retaining the same pitches:

Ex. 201



Write the following **three octaves higher,** using the Treble clef:

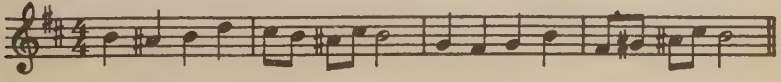
Ex. 202

Transpose Exercise 203 to the key of D minor:

Ex. 203

Transpose the following melody to the key of C minor:

Ex. 204



Transpose the melody of *America* one step higher.

Transpose the melody of *Annie Laurie* one step lower.

CHAPTER XXVI

CHORDS—THE TRIAD

A **Melody** is a succession of single tones.

A **Chord** is a combination of tones sounded simultaneously.

Tones used melodically. The same tones as a Chord.

Ex. 205

Ex. 206

A **Chord** may consist of Three, Four, Five, Six or Seven tones (not more than seven, as there are only seven tones in a diatonic scale).

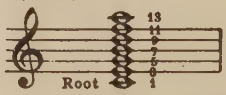
A **Chord** is a series of tones arranged one above the other in 3rds.

Ex. 207

The Lowest tone of a Chord is called the **Root** or **Fundamental.**

The tones of a Chord are numbered according to their distances from the Root:

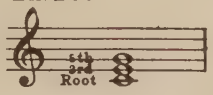
Ex. 208



The smallest Chord (and the one with which we shall have to do in this book) is the **Triad** (from Tri, meaning three).

The **Triad** consists of a Root, a 3rd above the Root, and a 5th above the Root.

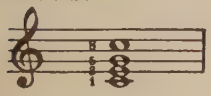
Ex. 209



As Chords are usually written on the basis of four voices—soprano, alto, tenor, and bass—one of the tones of the Triad must be Doubled (appear in two different voices at unison or octave). This Doubled tone is usually the Root (though in your later study of Harmony you will learn that the 3rd and 5th are sometimes doubled).

Our Chord then will appear as follows:

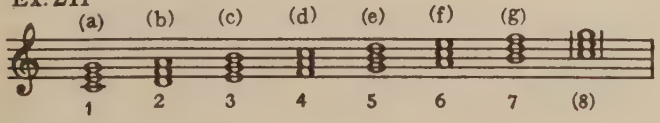
Ex. 210



but the Doubled Root does not affect the character of the Triad, as it is not another **different** tone.

The **Triad** can be formed with each of the seven tones of the Major scale as a root:

Ex. 211



Analyzing the above, we find the following scale tones used:

In (a) 1, 3, 5 (Do, Mi, Sol).
In (b) 2, 4, 6 (Re, Fa, La).
In (c) 3, 5, 7 (Mi, Sol, Ti).
In (d) 4, 6, 1 (Fa, La, Do).
In (e) 5, 7, 2 (Sol, Ti, Re).
In (f) 6, 1, 3 (La, Do, Mi).
In (g) 7, 2, 4 (Ti, Re, Fa).

A Triad receives its name according to the tone of the scale upon which it is built:

Ex. 212

Just as we have different "colors," or "qualities" in scales (Major, Minor, Chromatic), so we have different "qualities" in Triads.

From our knowledge of Intervals, we can analyze the Triads to see what intervals are used:

The Tonic Triad (built on 1 of the scale) consists of a Root, a Major 3rd above the root, and a Perfect 5th above the root.

The Supertonic Triad (built on 2 of the scale) consists of a Root, a Minor 3rd above the root, and a Perfect 5th above the root.

The Mediant Triad (built on 3 of the scale) consists of a Root, a Minor 3rd above the root, and a Perfect 5th above the root.

The Subdominant Triad (built on 4 of the scale) consists of a Root, a Major 3rd above the root, and a Perfect 5th above the root.

The Dominant Triad (built on 5 of the scale) consists of a Root, a Major 3rd above the root, and a Perfect 5th above the root.

The Submediant Triad (built on 6 of the scale) consists of a Root, a Minor 3rd above the root, and a Perfect 5th above the root.

The Leading-Tone Triad (built on 7 of the scale) consists of a Root, a Minor 3rd above the root, and a **Diminished** 5th above the root.

Making a summary of our analysis, we find that:
the Triads built on the Tonic, Subdominant, and Dominant (1, 4, 5, or Do, Fa, Sol) consist of a Root, a Major 3rd, and a Perfect 5th.

The Triads built on the Supertonic, Mediant, and Submediant (2, 3, 6, or Re, Mi, La) consist of a Root, a Minor 3rd, and a Perfect 5th.

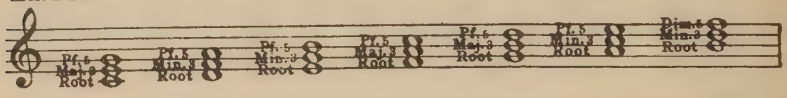
The Triad on the Leading Tone (7, or Ti) consists of a Root, a Minor 3rd, and a **Diminished** 5th.

From the above summary, we deduce the following definitions:
A Major Triad consists of Root, Major 3rd, and Perfect 5th, These are found (in every Major key) on 1, 4, 5, (or Tonic, Subdom., Dom.).

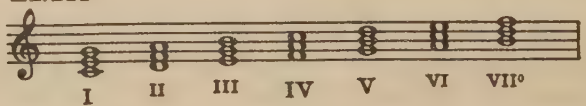
A Minor Triad consists of Root, Minor 3rd, and Perfect 5th. These are found (in every Major key) on 2, 3, 6, (or Supertonic, Mediant, and Submediant).

A Diminished Triad consists of Root, Minor 3rd, and Diminished 5th. This we find (in every Major key) on 7, (or Leading-Tone).

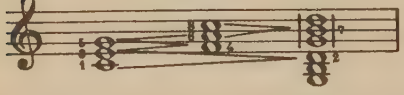
Ex. 213



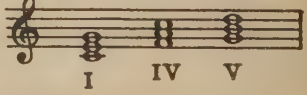
The Triads are usually designated by Roman Numerals as follows: large numerals for Major Triads, small numerals for Minor Triads, and small numerals with circle for Diminished Triads.

Ex. 214

The Tonic (I), Subdominant (IV), and Dominant (V) Triads together contain all seven tones of the Major scale. These are called the **Primary** or **Principal** Triads.

Ex. 215



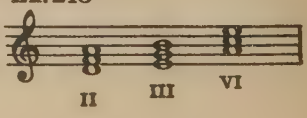
Ex. 216



The Supertonic (II), Mediant (III), and Submediant Triads (VI) together also contain all seven tones of the Major scale. These are called the **Secondary** or **Subordinate** Triads.

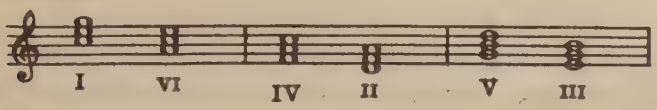
Ex. 217

Ex. 218



The Principal Triads are Major Triads.
The Subordinate Triads are Minor Triads.

Ex. 219



The Triad on 6 (Submediant) is the subordinate of I (Tonic).
The Triad on 2 (Supertonic) is the subordinate of IV (Subdominant).
The Triad on 3 (Mediant) is the subordinate of V (Dominant).

Questions on Chapter Twenty-six

1. What is a Melody?
2. What is a Chord in music?
3. How many tones may there be in a Chord?
4. Give another definition of a Chord.
5. What is the lowest tone of a Chord called?
6. How are the tones of a Chord numbered?
7. What is a Triad?
8. How many Triads may we have?
9. Which tones of the Major scale belong to:
   the Tonic Triad? Supertonic Triad? Mediant Triad? Subdominant Triad? Dominant Triad? Submediant Triad? Leading-Tone Triad?
10. Define a Major Triad.
11. Define a Minor Triad.
12. Define a Diminished Triad.
13. Name the Primary or Principal Triads. Have these the same numbers in every Major key?
14. Name the Secondary or Subordinate Triads. Have these

the same numbers in every Major key?

15. How are Triads usually indicated?

Ear-training for Chapter Twenty-six

There should be a thorough drill on all Triads. Begin with the Major Triads, leading the student to recognize the change in mood, color or quality when the Major Triad is converted into the Minor by simply lowering the 3rd of the chord. It is important that Major and Minor chords be mastered by ear before drill on the Diminished Triad is taken up.

Students should sing the three kinds of Triads in various keys, listening to the effect of each.

Written Work

Write the Major Triads in the following keys: C, G, D, A, E, B, F♯, C♯, F, B♭, E♭, A♭, D♭, G♭, C♭.

Write the Minor Triads in the following keys: C, G, D, A, E, B, F♯, C♯, F, B♭, E♭, A♭, D♭, G♭, C♭.

Write the Diminished Triad in the following keys: C, G, D, A, E, B, F♯, C♯, F, B♭, E♭, A♭, D♭, G♭, C♭.

Use **key-signatures** for the above.

Triads may also be built from each tone of the Minor scale, but we will leave this for you to learn when you take up, later, the study of Harmony.

CHAPTER XXVII

Cadences

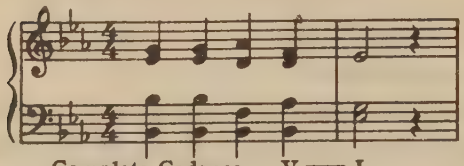
A Cadence is a point of **repose,** and means the Close or End, or Interruption of some complete musical thought. There is a Cadence of some kind at the end of a Phrase (a normal Phrase is four measures in length), and another Cadence at the end of a Period (a Period is normally eight measures in length).

The Cadence tone is usually of relatively longer duration than the tones preceding, in order to give the sense of Repose, and to mark the division of the Period into its two Phrases.

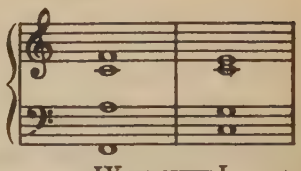
Cadences are broadly classified as of four kinds:

1. Perfect or Complete (Authentic) where the chords used are V-I.
2. Plagal (sometimes called the "Amen" Cadence because used at the end of a hymn) where the chords are IV-I.
3. Half Cadence, where the chords are I-V, II-V, or IV-V.
4. Deceptive or False, in which several progressions are possible, but very often V-VI is used.

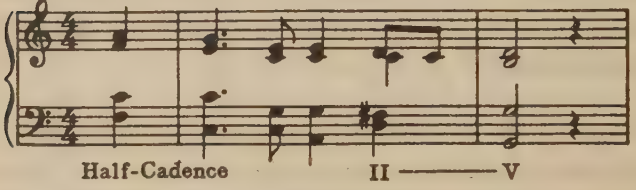
Ex. 220 Blue Bells of Scotland



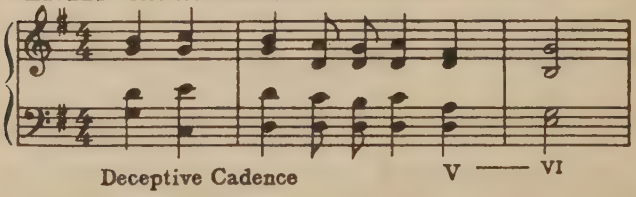
Ex. 221



Ex. 222 Annie Laurie



Ex. 223 The Lost Chord



Questions on Chapter Twenty-seven

1. What is meant by a Cadence in music?
2. What is a Complete or Authentic Cadence?
3. What is a Plagal Cadence?
4. What is a Half-Cadence?
5. What is a Deceptive Cadence?

Practically any kind of music will illustrate the different Cadences. Much music should be examined for this purpose.

Ear-training for Chapter Twenty-seven

The teacher plays various compositions; the students are to recognize and name the Cadences as they occur.

CHAPTER XXVIII

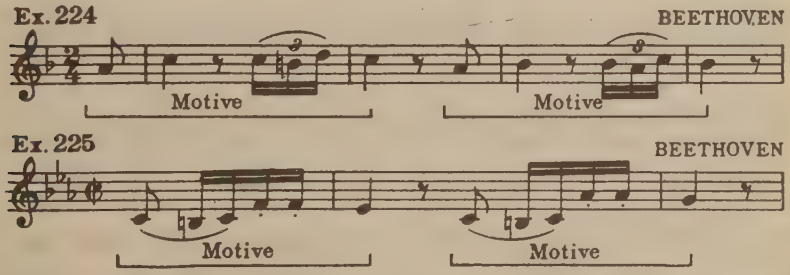
FORM

Form in music simply means a **plan of structure:** a certain number of measures set over against a certain number of other measures for **balance** and **order.**

The subject of Form, in its entirety, is an extensive one and comes under the more advanced work in music. In this book, we shall examine and use only the more elementary forms.

The smallest unit in musical composition is the single tone.

The smallest group of tones that will convey a definite musical impression as a musical idea, is called a **Motive.**

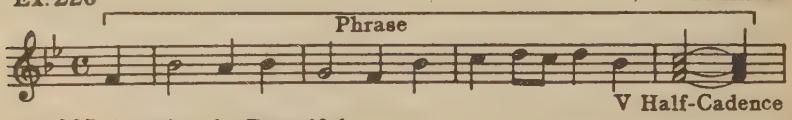


When a motive is divisible into smaller patterns, these are called **Figures.**

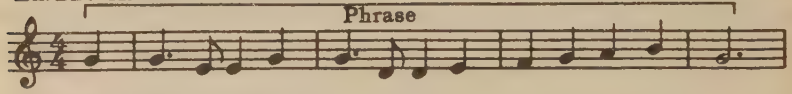
From the above two examples, it is seen that Motives may be similar in design, length, rhythm, etc., without being repeated exactly.

The **Phrase** is the smallest musical unit that expresses a complete idea, and in the majority of cases is **four measures** in length. The Phrase always ends with some kind of a Cadence.

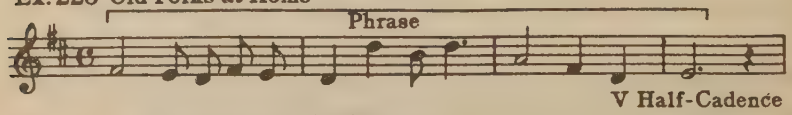
Ex. 226 BRAHMS



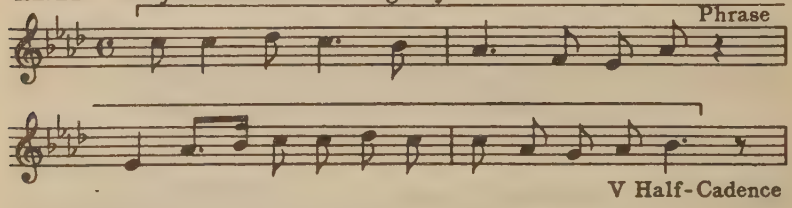
Ex. 227 America the Beautiful



Ex. 228 Old Folks at Home

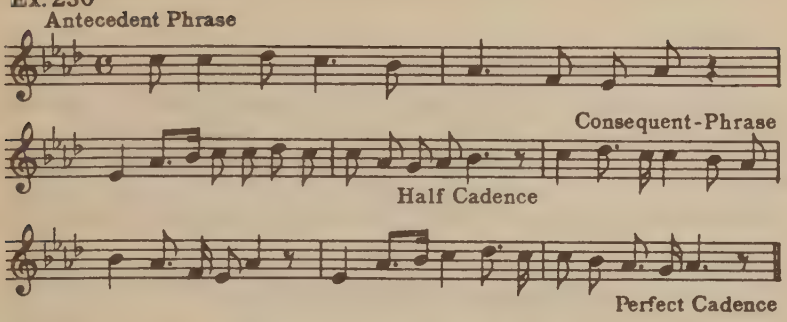


Ex. 229 Carry Me Back to Old Virginny



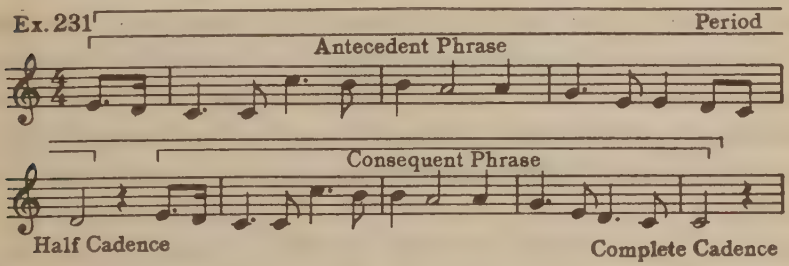
The **Period** is ordinarily **eight measures** in length, and is obtained by the addition of a second Phrase to the first Phrase. In a sense the Period may be considered as a double-phrase, the two Phrases being separated by a Cadence at the end of the first four measures. The Cadence at the end of the first Phrase is usually a Half-Cadence or a Deceptive Cadence; the Cadence at the end of the Period is practically always a Perfect Cadence.

Ex. 230



The first Phrase of a Period is called the **Antecedent** Phrase (or the Question). The second Phrase is called the **Consequent** Phrase (or the Answer). The second Phrase balances the first, and is often similar in melody and rhythm, the chief difference being in the Cadences. (see Example 230).

Ex. 231



The only difference in the two Phrases above is in the Cadence measure.

Questions on Chapter Twenty-eight

1. What is meant by Form in music?
2. What is the smallest unit in musical composition?
3. What is a Motive in music?
4. What is meant by a Figure in music?
5. What is a Phrase in music?

6. What kind of a Cadence do we usually find at the end of a Phrase?
7. What is a Period in music?
8. What kind of a Cadence do we find at the end of a Period?
9. What two names do we give to the first Phrase of a Period?
10. What two names do we give to the second Phrase of a Period?
11. Are the two Phrases similar in any way?

Ear-training for Chapter Twenty-eight

Students should learn to recognize Phrases and Periods by ear, as well as with the eye. Motives, Figures, and Cadences should be studied, both from the aural and visual standpoint.

Any collection of music will serve this purpose, including school songs, hymns, folk-songs and art songs of all nations. Especially good on the instrumental side, are the Songs Without Words of Mendelssohn, the Album for the Young, Op. 68, of Schumann, and the pianoforte sonatas of Mozart and Beethoven.

CHAPTER XXIX

Melody Writing

Melody writing is usually treated as a subject separate from elementary theory, it often being combined with the study of Ear-Training and Harmony.

Since, however, music is an art, the manifestation of which is sound, and since we hear sound through the ear, Ear-Training should not be postponed until the student is ready for Melody Writing (which assumes a mastery of the fundamentals of music), but should begin with the student's first lesson in music and never be discontinued. Not more than one person in fifty really hears what goes on at a concert, partly because the others do not know **how** to listen, and partly because they do not know what to listen **for.**

Melody writing is a big subject, and should be studied and practised along with Harmony, Counterpoint, and Orchestration, since there is no question that of the four principal elements of music — Rhythm, Melody, Harmony, and Form — Melody is of the first importance.

In this book, simply a beginning will be made, with the hope and expectation that the subject will be continued by the student when he takes up the more advanced theoretical work.

A Melody is any **succession of single tones;** the difference between a good melody and a poor one is in the **arrangement** of the tones.

While the ability to create a beautiful melody is undoubtedly a gift, and more or less inborn, yet there are certain laws which may be learned by those not particularly gifted along creative lines.

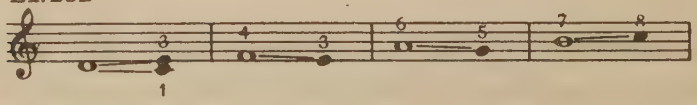
For the present we will use only the seven tones of the Major scale (no chromatics).

These seven tones may be classified as **Active** tones and **Tones of Repose.**

The Active tones are those which have a tendency to progress in a certain direction, that is: they demand a definite resolution for a satisfying effect.

The Active tones are 2, 4, 6, and 7 (Re, Fa, La, Ti).
The Tones of Repose are 1, 3, 5 (and 8). These tones can progress freely in any direction, and do not demand any specific resolution for a satisfactory effect, as they are in themselves tones of repose.
The usual progressions or resolutions of the Active tones are these:
2 goes to 1 or 3; 4 goes to 3; 6 goes to 5; and 7 goes to 8.

Ex. 232

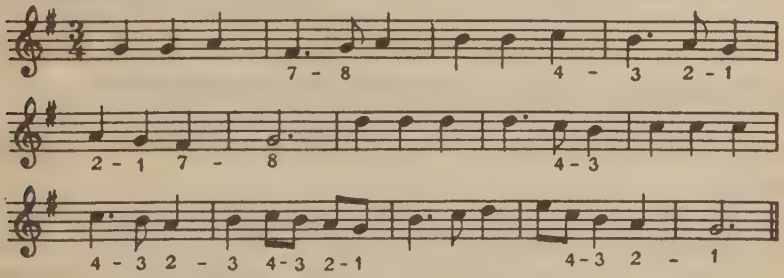


It will be seen that the Active tones progress or resolve to the Tones of Repose:

Ex. 233

Study the progression of the Active tones in *America*.

Ex. 234



Our first work will consist of the writing of scalewise or diatonic melodies (that is, without skips).

They will be four measures (a phrase) in length.

Melodies may begin on an accented or unaccented beat, but must end on an accented beat; the final tone will usually be of greater duration (longer) than the others.

Melodies in a meter of 2 (2-4, 2-2) will end on the first beat of the fourth measure.

Melodies in a meter of 3 (3-4, 3-8, 3-2) will end on the first beat of the fourth measure.

Melodies in a meter of 4 (4-4, 4-8) may end either on the first or third beat.

Melodies in a meter of 6 (6-8, 6-4) may end either on the first or fourth beat of the fourth measure.

The first measure may begin with 1, 3, or 5 (Do, Mi, Sol) of

the Major scale, and the last note will be 1 (Do), preceded by 2 or 7 (Re, Ti).

Only notes of beat value will be used (i. e. in 2-4, 4-4 only quarter notes will be used except in the final measure).

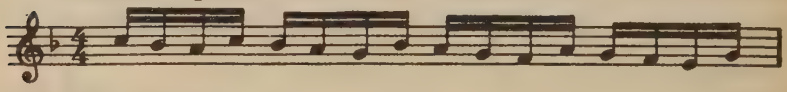
Notes may be repeated, but no skips are allowed in this lesson.

The Sequence (from three or four notes to a long phrase in length repeated at higher or lower pitches) may be used but not too often.

Note: A Sequence may be either Melodic or Harmonic. In this book, we are concerned only with the Melodic sequence.

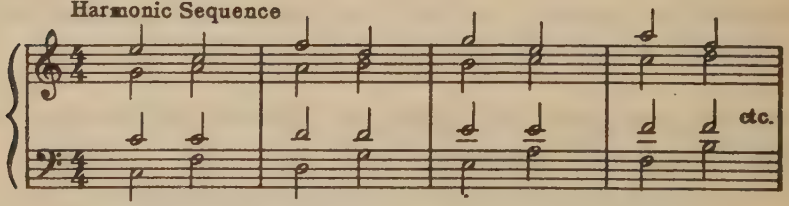
Ex. 235

Melodic Sequence



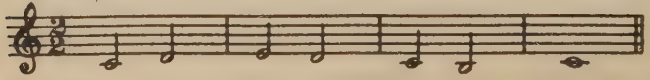
Ex. 236

Harmonic Sequence



Examples illustrating Scalewise (diatonic) melodies.

Ex. 237

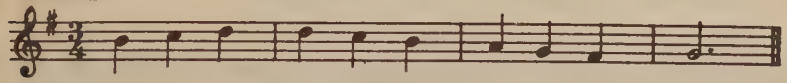


Ex. 238

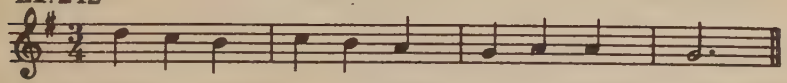
Ex. 239

Ex. 240

Ex. 241

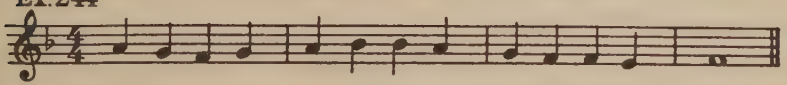


Ex. 242

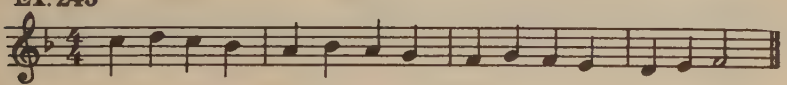


Ex. 243

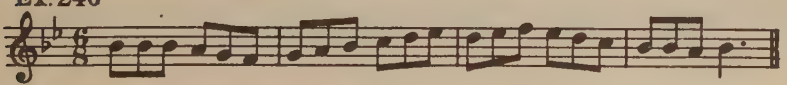
Ex. 244



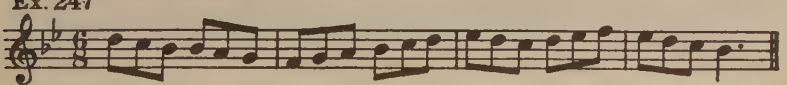
Ex. 245



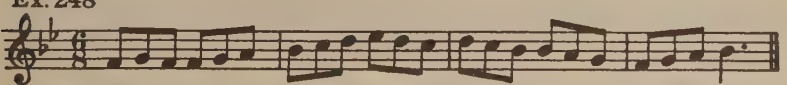
Ex. 246



Ex. 247



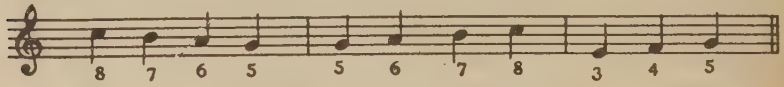
Ex. 248



The Skip of a Third

Although fundamentally the tendency of the Active tones should be respected (i. e. 7 moving to 8, 6 to 5, 4 to 3) these Active tones may be forced in the opposite direction by progressing along the scale.

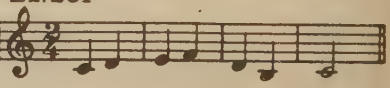
The following progressions are permissible:

Ex. 249

Examples of the Skip of a Third:

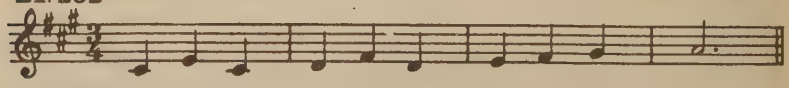
(The skip is usually made from, and often **to,** a tone of Repose, though Active tones may disregard their natural tendencies when they belong to the same chord). In example 252, the Active tones in the second measure all belong to the Subdominant (IV) chord.

Ex. 250

Ex. 251

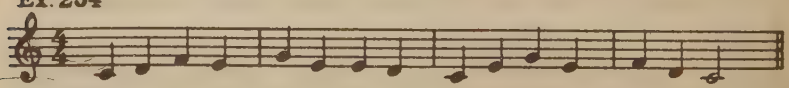


Ex. 252



Ex. 253

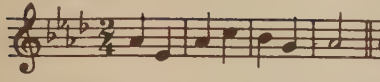
Ex. 254



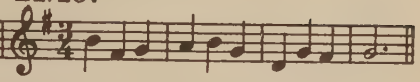
Ex. 255

The Skip of a Fourth

Ex. 256



Ex. 257

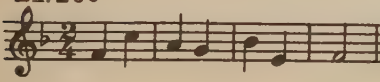


Ex. 258

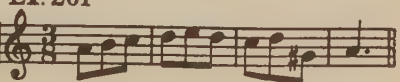
Ex. 259

The Skip of a Fifth

Ex. 260



Ex. 261



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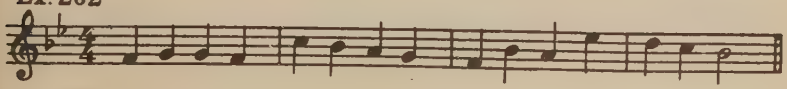
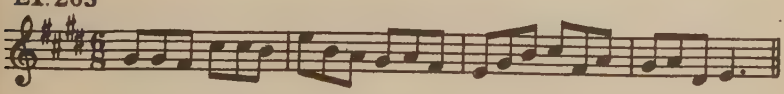
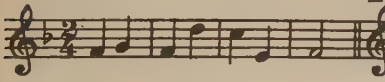

Ex. 263

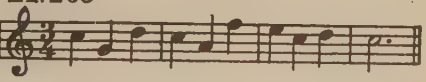


The Skip of a Sixth

Ex. 264



Ex. 265



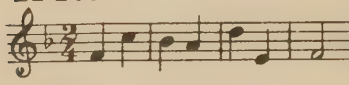
Ex. 266

Ex. 267

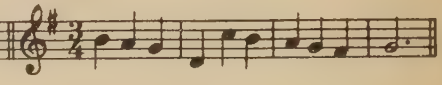
The Skip of a Seventh

This interval should be used sparingly. The best progressions are: 6 down to 7 (La down to Ti), and 5 up to 4 (Sol up to Fa).

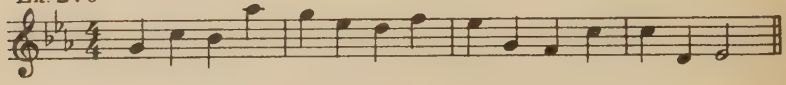
Ex 268



Ex. 269



Ex. 270



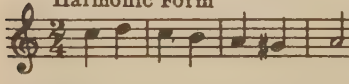
The Skip of an Octave

Ex. 271

Ex. 272

In writing Minor melodies, Approach the Leading Tone from Above when using scalewise the Harmonic form of the minor (avoid the Augmented 2nd).

Ex. 273
Harmonic Form



Ex. 274
Not

Ex. 275

Ex. 276
Melodic Form

Questions on Chapter Twenty-nine

1. What is a Melody?
2. What determines a good melody?
3. What is meant by an Active tone?
4. Which are the Active tones in the scale?
5. What is meant by Tones of Repose?
6. Which are the Tones of Repose in the scale?
7. Give the Resolution of the Active tones.

Ear-training for Chapter Twenty-nine

Students should listen to a number of familar melodies, noting the kinds of skips used, and the character of the melody as determined by these skips.

Written Work

Write melodies in Phrase form (four measures), using only the beat note.

1. **Diatonic** melodies (without skips).

		Minor Keys	
Key of C, $\frac{4}{4}$	Key of F, $\frac{2}{2}$	a, $\frac{2}{4}$	d, $\frac{4}{4}$
Key of G, $\frac{3}{4}$	Key of B♭, $\frac{3}{2}$	e, $\frac{3}{4}$	g, $\frac{3}{4}$
Key of D, $\frac{3}{4}$	Key of E♭, $\frac{4}{8}$	b, $\frac{4}{4}$	c, $\frac{9}{8}$
Key of A, $\frac{6}{8}$	Key of A♭, $\frac{2}{4}$	f♯, $\frac{5}{4}$	f, $\frac{6}{4}$
Key of E, $\frac{2}{4}$	Key of D♭, $\frac{6}{4}$	c♯, $\frac{3}{2}$	b, $\frac{4}{4}$
Key of B, $\frac{3}{4}$	Key of G♭, $\frac{3}{8}$	d♯, $\frac{6}{8}$	e, $\frac{6}{8}$
Key of F♯, $\frac{9}{8}$	Key of C♭, $\frac{6}{8}$	a♯, $\frac{4}{8}$	a, $\frac{3}{4}$
Key of C♯, $\frac{4}{4}$			

2. Write melodies in Phrase form in the same keys and meters as 1, using the Skip of a Third.
3. Write melodies in Phrase form in the same keys and meters as 1, using the Skip of a Fourth.

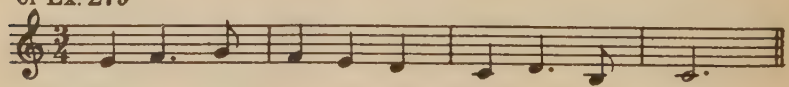
4. Write melodies in Phrase form in the same keys and meters as 1, using the Skip of a Fifth.
5. Write melodies in Phrase form in the same keys and meters as 1, using the Skip of a Sixth.
6. Write melodies in Phrase form in the same keys and meters as 1, using the Skip of a Seventh.
7. Write melodies in Phrase form in the same keys and meters as 1, using the Skip of an Octave.
8. Write melodies in Phrase and **Period** form, employing the above keys and meters, **but this time, vary the rhythm within the meter.**

Ex. 277

Example 277 may be varied as follows:

Ex. 278

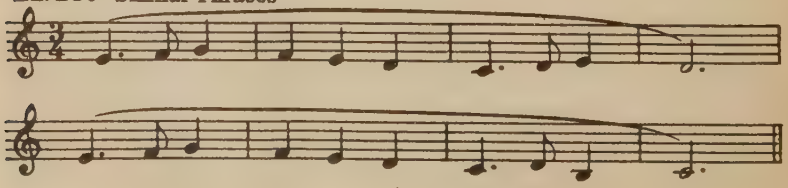
or Ex. 279



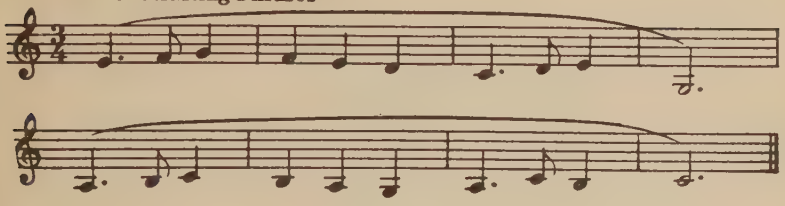
In Period form, at the end of the first Phrase use a Half-Cadence ending on 5, 7, or 2 of the scale).

Example 278 in Period form, might be written as follows:

Ex. 280 Similar Phrases



Ex. 281 Contrasting Phrases



CHAPTER XXX

Tempo

Tempo means the **rate of speed** at which a musical composition is played or sung.

The most common words indicating Tempo are:

Grave .....Solemn.
Lento .....Very slow.
Largo .....Large or Broad.
Adagio .....Slowly. Leisurely.
Andante .....Going at a moderate pace, rather slow.
Andantino .....A little quicker than Andante.
Moderato .....Moderately.
Allegretto .....Bright and cheerful.
Allegro .....Lively.
Presto .....Very fast.
Prestissimo .....As fast as possible.

Words Indicating Variations of Tempo

Accelerando .....Gradually faster.
Allargando .....Broadening, gradually slower.
Rallentando .....Gradually slower.
Ritardano .....Retarding, growing slower.
A tempo .....In regular time.
Ad libitum or A piacere.....At pleasure.
Meno mosso .....Less fast.
Più mosso .....Quicker (more motion)

Compositions should be played (with the music in the hands of the students if possible) noting especially the Tempo markings.

CHAPTER XXXI

Dynamics

Words indicating **Dynamics** (Force, or Loudness and Softness).

Pianissimo (pp)	Very soft.
Piano (p)	Soft.
Mezzo piano (mp)	Medium soft.
Mezzo forte (mf)	Medium loud or strong.
Forte (f)	Loud or strong.
Fortissimo (ff)	Very loud or strong.
Crescendo (Cresc.)	Gradually growing louder.
Dimimuendo or Decrescendo (Dim., Decresc.)	Gradually decreasing the volume.
Sforzando (sfz., or sf.)	Forcing the tone, suddenly loud or strong.
Morendo	Dying away.

The above list is far from complete, but contains the most common terms. For a more exhaustive list, consult any good dictionary of music.

Compositions should be played or sung (with the music in the hands of the students) noting especially the Dynamic markings.

APPENDIX A

Instruments of the Symphony Orchestra

The instruments of the Symphony Orchestra are divided into four groups, as follows:

1. Strings.
2. Wood-wind.
3. Brass.
4. Percussion.

Included in the String Choir are:

1. Harp.
2. Violin.
3. Viola.
4. Violoncello.
5. Double-bass.

Included in the Woodwind Choir are:

1. Piccolo.
2. Flute.
3. Oboe.
4. Clarinet (in A and B♭.)
5. Clarinet in E♭.*
6. English Horn.
7. Bassoon.
8. Contra-bassoon.
9. Bass Clarinet.
10. Bass Flute.*

Included in the Brass Choir are:

1. French Horn.

2. Trumpet.
3. Trombone (Tenor).
4. Tuba.
5. Bass Trombone.
6. Double-bass Trombone.*

Included in the Percussion Section are:

1. Tympani (Kettle-drums).
2. Side (or Snare) Drum.
3. Bass Drum.
4. Cymbals.
5. Triangle.
6. Gong.

And various others when occasion calls for them, such as Castanets, Xylophone, Bells, Celesta, Glockenspiel, etc.

* Unusual instruments.

APPENDIX B

Beating Meters

While Conducting is a separate and highly specialized phase of music, yet the student should have practice in beating the simple meters.

Meters of Two are beaten **Down-Up;**

Meters of Three, **Down-Right-Up;**

Meters of Four, **Down-Left-Right-Up;**

Meters of Six, **Down-Left-Left-Right-Right-Up.**

In meters of Two, the Accent is on One (first beat).

In meters of Three, the Accent is on One (first beat).

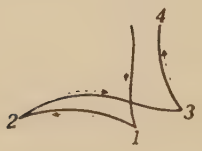
In meters of Four, the Principal Accent is on One, with a lighter accent on Three.

In meters of Six, the Principal Accent is on One, with a lighter accent on Four.

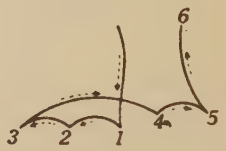
Meters of Two.

Meters of Three.

Meters of Four.

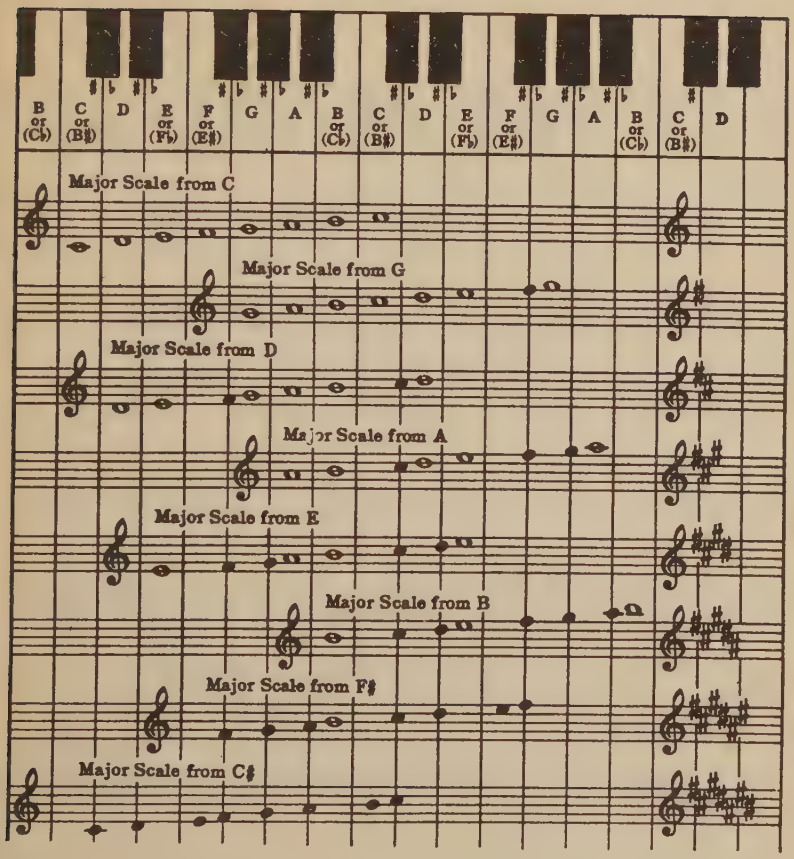


Meters of Six.

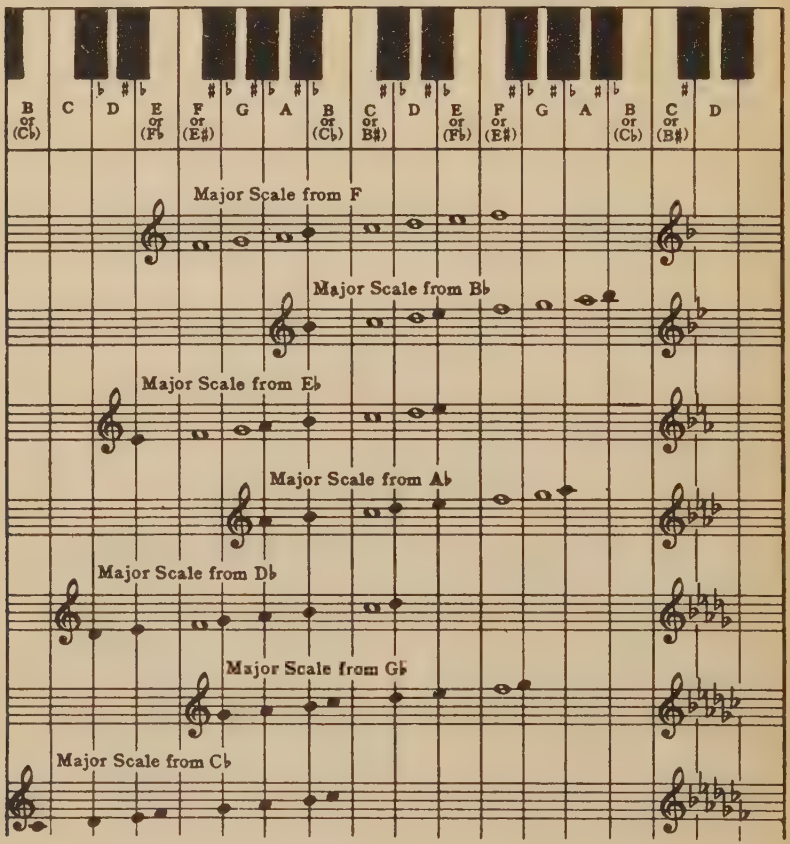


APPENDIX C

Diagram of Two Octaves of the Keyboard

On page 133 is the **Major Scale Pattern** beginning on different notes (pitches), showing the necessity for using one or more sharps when the scale is played from any pitch other than C. The black keys are called sharps when named from the white key below. Example: the first black key of the group of two is called C sharp, receiving its name from the white key (C) below. The same with the other black keys. In the case of adjoining white keys, E-F, B-C, the F may be called E sharp, and the C may be called B sharp.

On page 134 is the **Major Scale Pattern** beginning on the different pitches requiring flats. The black keys are called flats when named from the white key **above.** Example: the first black key of the group of two is called D flat, receiving its name from the white key (D) above. The same with the other

black keys. In the case of adjoining white keys, F-E, C-B, the E may be called F flat, and the B may be called C flat.



1 1 $\frac{1}{2}$ 1 1 1 $\frac{1}{2}$ Maj

1 $\frac{1}{2}$ 1 1 $\frac{1}{2}$ 1 1 P Min

1 $\frac{1}{2}$ 1 1 $\frac{1}{2}$ 1$\frac{1}{2}$ $\frac{1}{2}$ H Min

1 $\frac{1}{2}$ 1 1 1 1 $\frac{1}{2}$ Mel Min.
)

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